# The Supporting Document for the Klamath Falls Resource Area Third Year Evaluation

**July 31st, 2001**

This supporting document consists of the various staff conclusions, recommendations, and follow-up recommendations developed as part of the Oregon State Office staff evaluations conducted for both the biological and non-biological resources. The conclusions, recommendations, and follow-up recommendations helped develop the findings for the Klamath Falls Resource Area Third Year Plan Evaluation. The supporting document is not all inclusive of the information used in the Plan Evaluation, nor does it include any meeting minutes or notes. The Oregon State Office staff evaluations relied heavily on the information contained in the *Fiscal Year 1998 Annual Program Summary & Monitoring Report for the Klamath Falls Resource Area* (APS), and the *Klamath Falls Resource Area Record of Decision and Resource Management Plan* (ROD).

**It should be noted that**:

- Numerous staff members prepared the individual sections of this supporting document resulting in changes in the writing styles between sections;
- The supporting document is not a National Environmental Protection Act (NEPA) document, therefore the use of the word "significant" does not have the same connotation as the word "significance" under NEPA.
- There were some programs or program elements in this supporting document for which the State Office staff made recommendations to further improve compliance and implementation even though they were generally in compliance with RMP management action/direction, assumptions and conclusions. The recommendations involve relatively minor adjustments to implementation that can be accomplished within existing management action/direction and would not require an amendment to the RMP. Those programs or program elements for which recommendations were made to improve RMP compliance and implementation have been carried forward and are listed in the Third Year Plan Evaluation.
- The conclusions and recommended follow-up as presented in this supporting document were accurate as of the end of fiscal year (FY) 1998, however actions or activities that have occurred subsequent to the end of FY 98 are not included in either the supporting document or the Third Year Plan Evaluation.

## Analysis, Conclusions and Recommendations by Related Program or Resource Groups:

### 1. Recreation, Visual Resources, Off-Highway-Vehicle Use, Wilderness and Wilderness Study Areas, Wild and Scenic Rivers, and Significant Cave Management

**Recreation:** The Resource Area continues to provide a wide range of recreation opportunities, from developed camping/picnic facilities and trails in established Special Recreation Management Areas to dispersed motorized and non-motorized recreation activities (RMP/ROD,

pp. 47; APS, pp. 36). Recreation Pipeline Restoration Funds (APS, pp. 17) have been effectively utilized to complete a number of backlog recreation projects, with the focus on infrastructure replacement and/or facility maintenance recreation projects, and also meeting Americans with Disabilities Act (ADA) requirements and critical unresolved visitor service and management needs. New recreation improvements and major maintenance projects have been implemented so as not to prevent meeting Aquatic Conservation Strategy objectives.

Recreation visitor management efforts have been implemented to reduce or eliminate impacts to riparian and other fragile resources to the extent budget constraints allow. Recreation management areas are being managed in accordance with survey and manage protocols, and no new recreation developments have been initiated with Late-Successional Reserve (LSR) areas. Major program emphasis has been directed toward information/interpretative signing, maps and brochures, visitor contact and compliance, and other efforts to reduce resource impacts and improve visitor experiences. The Resource Area has been directly involved in supporting and enhancing tourism initiatives and community economic strategies through the provision of recreation projects and programs. In addition, the Resource Area provides financial support for the Klamath/Lake/Modoc Outdoor Recreation Working Group. The group has produced a variety of maps, brochures, and displays for visitors to the southern Oregon and northern California region. Hazard tree inventory and maintenance at developed recreation sites have been fully implemented.

Significant recreation site/area accomplishments include Wood River Wetland ADA trail and facility improvements, Topsy and Gerber Recreation sites, and upper Klamath River boat launch improvements. Other projects identified in the ROD/RMP are budget dependent and/or require completion of project plans.

**Visual Resources:** All proposed projects and changes to the landscape have been reviewed for compliance with visual resource management standards as required by the RMP/ROD (pp. 43). Mitigation measures and project design considerations were prescribed for activities having the potential to affect visual resources including road improvement and maintenance projects, recreation improvements and developments, forest management activities, and other projects resulting in human-caused changes to the landscape (APS, pp. 35).

**Off-Highway Vehicles:** Open areas within the Northwest Forest Plan were shifted to the limited or designated categories in compliance with the RMP/ROD designations (pp. 51). Additional minor modifications or clarifications to Off-Highway Vehicles (OHV) designations may occur through watershed analysis and transportation management planning (APS, pp. 41). An OHV trail inventory (through an All Terrain Vehicle (ATV) allocation committee grant) was recently completed in the Resource Area, identifying OHV trail opportunities. OHV implementation, including maps, brochures, signing and compliance, road repair or decommissioning, and OHV barriers are ongoing program objectives.

**Wilderness Study Areas:** The Mountain Lakes Wilderness Study Area (WSA) is being protected and monitored following WSA interim management guidelines (RMP/ROD pp.45; APS, pp. 32) Monitoring occurs on a monthly basis during the months the area is free of snow,

typically June through October.

**Wild and Scenic Rivers**: The Upper Klamath River is currently being managed in accordance with Wild and Scenic Rivers Act requirements to protect outstandingly remarkable values (RMP/ROD, pp. 42 and 45; APS, pp. 32 and 36). Fish, wildlife, recreation and cultural resource monitoring have taken place on a regular basis. The Resource Area has a signed Memorandum of Understanding with Oregon State Parks on joint management of the Wild and Scenic River/State Scenic Waterway. Initial steps to develop a Wild and Scenic River plan are expected to begin in 2000 in conjunction with the State of Oregon and PacifiCorp. PacifiCorp, which has extensive land holdings along the Klamath River, expects to file a letter of intent with Federal Energy Regulatory Commission (FERC) indicating it intends to file for a new license application for the Klamath River projects in October 2000.

**Significant Caves:** Cave inventories have been completed. Only the Salt Caves complex within the Upper Klamath River corridor was identified as having significant values worthy of protection under the Federal Cave Protection Act. The cave complex is under protective interim management, which should be sufficient until the development of a Wild and Scenic River plan in 2000 in conjunction with the State of Oregon river plan and PacifiCorp hydro-power re-licensing.

**Conclusions and Recommended Follow-up:** The interdisciplinary review team concluded that the Recreation, Visual Resources, Wilderness Study Areas, Off-Highway-Vehicle Use, Wild and Scenic Rivers, and Cave Management programs are consistent with the RMP and associated EIS for the first three years. Any deferrals or partial activity implementation completion is reasonable, given the stage of RMP implementation and any deviations were rational, reasonable and unlikely to have any unexpected significant adverse effects in the near-term. Local data have been considered as appropriate and have not contradicted the RMP analytical assumptions, land use allocations, authorized resource uses or anticipated mitigation measures to a sufficient degree to warrant consideration of further analysis or a formal plan amendment or revision at this time. There are no significant changes required as a result of other federal, state, local or tribal government plans, programs, or policies. No changes in program direction or practices appear to be warranted based on program monitoring, activity implementation, or this review, except for the need to address the Salt Caves management and protection in the joint plan with the State for the Upper Klamath River.

## 2. Archeology, Cultural and Historical Resources

No historic sites are nominated or listed to the National Register of Historic Places in the Klamath Falls Resource Area RMP/ROD (pp. 43). No sites have been nominated to the National Register since the RMP was approved, but two draft historic District nominations were prepared, one for the Klamath River Canyon Archaeological District and the other for the Bryant Mountain District. Over the past three years, more than 170 additional cultural sites were recorded, and surveys encompassing about 24,000 acres of land were conducted (APS, pp. 34). Consultation

procedures with the State Historic Preservation Officer were revised by the 1998 statewide Cultural Protocol. The Resource Area's site and survey data base is being updated. The program remains highly responsive to surface-disturbing project proposals. Southern Oregon University excavated at four sites at Wild Gal Spring, and limited test excavations occurred at Gerber Reservoir and at nine sites on land disposal projects.

Other primary progress also included a joint wildlife/cultural resource management plan in the Bald Eagle Management Area. A draft plan is currently being developed for significant cultural sites found in the Wood River restoration area based on results of extensive recording and protecting of sites through the past several years. Monitoring to determine if cultural resource values are being adequately protected is difficult for the juniper woodland management program and prescribed burn program due to the numerous projects. Vandalism and looting of historic sites have been a major problem in the Resource Area and have been addressed by law enforcement responses.

Native American tribal consultation (APS, pp. 35) required a considerable amount (approx. 20 percent) of the Resource Area's cultural resource specialist's time. The Klamath Falls area's proximity to the Klamath Tribes offices and former reservation lead to much interaction. An estimated 100 meetings, field visits, or other contacts related to BLM projects occurred with The Klamath Tribes over the past three years. Project notification and consultation occurs with the Klamath Tribes, Fort Bidwell, Paiute, and the Shasta through the Quartz Valley Rancheria. Notification has occurred with major management plan and project actions, such as the Lorella Pumped Station Project. Some paleo-environmental information regarding historic vegetation patterns will be gained by soil coring at Wood River. A general consultation Memorandum of Understanding with the Klamath Tribes has been identified as desirable to further management of the extensive coordination and consultation workload.

An ethnobotanical study in cooperation with Notre Dame University and others has been active in the southwest portion of the Resource Area where Klamath Tribes' concerns have been identified. A possible ACEC area exists in the Gerber Reservoir area based on traditional plant gathering activities. Other important opportunities for ethnobotany may include multi-tribal traditional use areas or areas with unknown plant communities of interest to tribes. A current effort by the Resource Area's archeologist may affirm tribal interests based on broad vegetation species lists.

There have been some unofficial requests for additional tribal "wocus" plant gathering or use areas. Tribal members have not expressed concern about generic disposal of public lands within treaty ceded areas that may have historic use values and be important to tribal members. Commercial juniper bough cutting and gathering of wild edible plants in traditional tribal areas by non-tribal members have been extremely limited and have not created any controversy. Joint BLM/USFS prescribed fire plans could have the potential to benefit big game habitat and botanical values important to tribal cultures. Formal consultation with federal regulatory agencies in ongoing projects, including the Federal Energy Regulatory Commission (FERC), could also benefit tribal interests.

**Conclusions and Recommended Follow-up:** The interdisciplinary review team concluded that the Archeology, Cultural and Historical Resources programs are consistent with the RMP and associated EIS for the first three years. Any deferrals or partial activity implementation completion is reasonable, given the stage of RMP implementation and any deviations were rational, reasonable and unlikely to have any unexpected significant adverse effects in the near-term. Local data have been considered as appropriate and have not contradicted the RMP analytical assumptions, land use allocations, authorized resource uses or anticipated mitigation measures to a sufficient degree to warrant consideration of further analysis or a formal plan amendment or revision at this time. There are no significant changes required as a result of other federal, state, local or tribal government plans, programs, or policies. No changes in program direction or practices appear to be warranted based on program monitoring, activity implementation or this review.

### 3. Realty, Land Tenure Adjustment, Rights-of-Way, Access, Withdrawals and Trespass

**Land Tenure Adjustment**: The major emphasis in land tenure adjustments has been on disposal due to Congressional direction in the Wood River acquisition (RMP/ROD, pp. 64; APS, pp.59). In 1992, Congress directed BLM to acquire the Wood River Ranch and to dispose of appropriate land in Klamath County to compensate for the tax revenue loss. The Wood River Ranch resulted in the acquisition of important waterfowl habitats, consistent with the RMP (ROD, pp.35), and the unexpected acquisition of some significant cultural sites (ROD, pp.43).

The RMP identified about 24,000 acres in Zone 3 (lands that could potentially be disposed). Decisions to dispose of specific tracts identified in the RMP as available for disposal are made only after coordination with staff specialists to ensure that all resource values have been identified and protected. As a result of a site-specific analysis, some Zone 3 parcels identified in the RMP for disposal will be retained in federal ownership to protect important values. These determinations will be noted in the ongoing plan amendment. The Resource Area evaluated about 9,000 acres of public land for sale, determining to retain about 1,600 acres and approving sale of about 1,600 acres; no decision was made to sell or retain the other 5,800 acres evaluated. No decision has been made as to retaining or selling the other 15,000 acres in Zone 3.

A number of public meetings were held during the proposed land exchange for the Wood River parcel. The general consensus of the residents of Klamath Forest Estates, one of two main rural interface areas in the Resource Area, was preference for BLM to retain ownership of public lands in that area. As a result, the BLM will be reviewing the present land tenure status of these lands to determine if a zone change is necessary.

The Resource Area completed a plan amendment in 1999 to change a small parcel from land tenure zone 1 to zone 3 to allow disposal through sale. The plan amendment also added a general provision to the land tenure provisions of the RMP to place lands later discovered through survey, or lands where there are unintentional encroachments, into Zone 3. This will allow flexibility to dispose of the lands through sale, if appropriate.

**Access:** Efforts to acquire access have been driven by timber sale proposals; there is no long-term strategy. The Resource Area has not pursued acquisition (APS, pp. 58) of the specific access routes recommended in the RMP/ROD (pp.51) due to their low priority and funding priorities on other resource values. The Resource Area identified a need for the State Office staff to develop policy regarding condemnation/use of eminent domain to be able to negotiate for access effectively. (Also see Section 19, Transportation and Roads.)

The Resource Area uses the RMP to grant minor use authorizations using plan conformance determinations. Resource objectives in the RMP are used to develop appropriate mitigation measures on other actions.

**Withdrawals :** The Resource Area has not pursued withdrawal reviews (ROD, pp. 70) or new withdrawals (ROD, pp. 49/68) because they are low priority. There have not been any problems with resource damage to proposed withdrawal areas as a result of mining activity (APS, pp. 59).

However, hydropower relicensing issues will be a bigger workload in the near future. The Resource Area has asked the Bureau's National Applied Resource Science Center staff to help document water rights claims in the Klamath Basin and will use that information to determine appropriate instream flows to recommend to Federal Energy Regulatory Commission (FERC) (ROD, pp. 67). The Resource Area is coordinating on-site training in FY99 on FERC issues so that they can comply with the RMP direction to develop instream flows and habitat condition requirements and ensure that Aquatic Conservation Strategy objectives are met on hydropower projects (ROD, pp.67).

The rural interface areas are being developed by the private sector more rapidly than was anticipated (RMP/ROD, pp. 46). This will likely increase demand for minor rights-of-way; roads, electric distribution lines, and other utilities and create increased pressure on resources on adjoining public lands (APS, pp. 35).

**Conclusions and Recommended Follow-up:** The interdisciplinary review team concluded that the Realty, Land Tenure Adjustment, Access, Withdrawal Review and Trespass programs are consistent with the RMP and associated EIS for the first three years. Actions taken to implement the RMP are documented by providing information to the Resource Area planner. Any deferrals or partial activity implementation completion is reasonable, given the stage of RMP implementation; any deviations were rational, reasonable, and unlikely to have any unexpected significant adverse effects in the near-term. Local data have been considered as appropriate and have not contradicted the RMP analytical assumptions, land use allocations, authorized resource uses, or anticipated mitigation measures to a sufficient degree to warrant consideration of further analysis or a formal plan amendment or revision at this time. There are no significant changes required as a result of other federal, state, local or tribal government plans, programs, or policies. Only one change in program direction or practices appears to be warranted based on program monitoring, activity implementation or this review. The Realty Program would benefit from development of an action plan for easement acquisition and withdrawal actions.

**4. Mineral and Energy Resources and Surface Protection**

Leasable, locatable, and salable minerals and energy resources are adequately addressed in the RMP (ROD, pp. 59; and ROD Appendix G, pp. G-1-21). The 43 *Code of Federal Regulations* (CFR) 3715 "Mining Claim Use and Occupancy" regulations, effective August 15, 1996, essentially provide the tools to apply the occupancy stipulations anticipated in the RMP/ROD for any locatable mineral mining claim residence problems. Current discretionary locatable mineral closures are documented. Currently, very limited commercial or general public recreational interest in locatable minerals in the Resource Area exists (APS, pp. 59). The limited activity for gold and any other activities are currently under regulatory required notice for "casual use" (five acres) limits and the 43 CFR, Part 3809 regulations are adequate protective constraints. Currently, no mining notices are received annually. Programmatic monitoring of locatable mineral activities occurs in the most active use areas, with emphasis on riparian corridor and water quality effects.

The RMP addresses leasable oil and gas and geothermal resources, including use of "reasonable foreseeable development scenarios." Leasable mineral development potential is generally moderate, with no current leases or known interest. No known test drilling or other major exploration activity to suggest the potential for discovery of new deposits or resources has occurred since the RMP was approved. Special stipulations in the RMP should be sufficient if leasing occurs.

The RMP/ROD (pp. 61) assumes mineral material sources will be available for a variety of users, that emphasis will be on long-term quarry use with some new sites developed, as needed, to meet Bureau needs for transportation system management. Mineral material requirements for road surfacing or other projects are being met through use of existing or proposed new pits on Bureau lands with no documented adverse effects. Two pits are used for State and county road materials. There is growing demand for negotiated sales. There is no known public concern about any impacts from the unreclaimed material sites.

The abandoned mines land (AML) program evolved after RMP completion. An inventory of 11 known sites identified no sites with potential safety or human or environmental health problems. In the event problem sites are identified in the future, the RMP could be amended or an activity plan prepared to address site issues and impacts related to these sites, and assure that other RMP objectives or State water quality objectives are met.

**Conclusions and Recommended Follow-up:** The interdisciplinary review team concluded that the Mineral and Energy Resources and Surface Protection programs are consistent with the RMP and associated EIS for the first three years. Implementation activity has been responsive to demand or use and is reasonable, given the stage of RMP implementation. There were no identified, unexpected significant adverse effects in the near-term. Local data have been considered as appropriate, but have not contradicted the RMP analytical assumptions, land use allocations, authorized resource uses or anticipated mitigation measures to a sufficient degree to warrant consideration of further analysis or a formal plan amendment or revision at this time. There are no significant changes required as a result of other federal, state, local or tribal

government plans, programs, or policies. No changes in program direction or practices appear to be warranted based on program monitoring, activity implementation or this review.

## 5. Hazardous Materials

The hazardous material program (RMP/ROD, pp. 74) is primarily reactionary to project proposals and problems and is essentially non-discretionary (FY98 APS, pp. 59). The one former public landfill is now operated as a transfer station and is monitored. Public dumping in the urban interface area is an increasing problem and workload, especially with the newly expanded Environmental Protection Agency list of "hazardous materials." An average of one contaminated Comprehensive Environment Response, Compensation and Liability Act (CERCLA) designated site per year has been determined to be hazardous and cleaned up, with appropriate coordination with the Oregon Department of Environmental Quality.

Environmental site assessments have helped the Bureau avoid inappropriate land acquisitions. A 1997 *Compliance Assessment - Safety, Health and the Environment* (CASHE) review identified numerous problem areas on or in Bureau facilities, of which 80 percent have been resolved, and resolution of the remainder is underway.

**Conclusions and Recommended Follow-up:** Overall, the interdisciplinary review team concluded that the hazardous materials program is not controversial or inconsistent with other RMP elements. Implementation activity has been responsive to demand and is reasonable. There are no significant changes required as a result of other federal, state, local or tribal government plans programs or policies. No changes in program direction or practices appear to be warranted based on program monitoring, activity implementation or this review. The RMP Hazardous Materials Objectives do not fully reflect all aspects of the hazardous materials program, especially the need for environmental site reviews and employee and public safety. Since these program elements are required by law and could be more readily referenced by other staff if included in the RMP, it is recommended that they be incorporated into the RMP through plan maintenance via a State Director policy statement.

## 6. Areas of Critical Environmental Concern (ACEC) and Special Areas

There are five designated ACECs within the Klamath Falls Resource Area (RMP/ROD, pp. 41), including the Wood River ACEC, which was designated through a separate RMP/EIS/ROD in 1995, one Research Natural Area (RNA/ACEC) and two Environmental Education Areas (EEA/ACEC). The Wood River ACEC has a specific prescriptive plan, developed in conformance within a separate RMP that provides overall management direction and resource use constraints (APS, pp. 32).

The Wood River ACEC, which was of substantial public interest, has been largely developed

(APS, pp. 33), including river re-channelization and implemented with interpretive facilities and view points. Implementation and management direction has been closely coordinated with the Klamath Tribes. The project has its own published annual monitoring report, covering a wide range of resources. There are also an annual on-site meeting and tour for interested publics.

The Old Baldy RNA/ACEC is co-managed with the Medford District. There has been no formal research in the RNA, but a prescribed fire planned for FY99 might partially effect the RNA. Interpretive education uses at the Clover Creek and Surveyor Forest EEA receive substantial numbers of local visitors each year. Both areas have been fenced, and Surveyor Forest EEA management is addressed in a coordinated resource activity plan for the tier one watershed.

The Upper Klamath River ACEC will be addressed in the co-management plan for Wild and Scenic river values with the State of Oregon Wild and Scenic River/ State Scenic Waterway plans. None of the protective lands and minerals withdrawals for ACECs have been completed. None of the ACECs have been threatened by unexpected uses or uncontrolled Off-Highway-Vehicle use. A tribal plant gathering area on the Gerber block may be proposed. There are no potential new ACECs that would require review by an interdisciplinary team.

**Conclusions and Recommended Follow-up:** The interdisciplinary review team concluded that the Areas of Critical Environmental Concern (ACEC) and special area's programs are consistent with the RMP and associated EIS for the first three years. Any deferrals or partial activity implementation completion is reasonable, given the stage of RMP implementation; any deviations were rational, reasonable, and unlikely to have any unexpected significant adverse effects in the near term. Local data have been considered as appropriate, but have not contradicted the RMP analytical assumptions, land use allocations, authorized resource uses, or anticipated mitigation measures to a sufficient degree to warrant consideration of further analysis or a formal plan amendment or revision at this time. There are no significant changes required as a result of other federal, state, local or tribal government plans, programs, or policies. No changes in program direction or practices appear to be warranted based on program monitoring, activity implementation, or this review.

## 7. Water and Soils, Hydrology and Rangeland Resources

Hydrology and soils-related data acquisition and related monitoring (RMP/ROD, pp. 12, 28 and 81) by BLM staff have affected Resource Area workloads, project design, and placement or scheduling (APS, pp. 19). Data base development included water quality in municipal watersheds; a new Geographic Information System for streams, lakes and wetlands; and BLM-operated gauging or temperature monitoring stations. Watershed analyses were developed in cooperation with the Oregon Department of Environmental Quality and other federal agencies. A cooperative agreement and watershed plan for Yreka municipal watershed (Fall Creek) was developed with the Medford District. There were no significant local or regional concerns over municipal water supplies, rain on snow events, or other flooding that might affect local water quality and beneficial uses.

For most water quality non-attainment streams (303d listed) in the Klamath Falls Resource Area, water temperature is the greatest problem with some habitat or flow modification, sediment, and dissolved oxygen problems. On some streams, the water temperature objectives may not be attainable due to extensive areas of private land in the watersheds. Proper functioning condition surveys have been completed on most streams and actions initiated to improve conditions (APS, pp. 20). Corrective actions include riparian exclosure fences, road closures and obliteration, and other rehabilitation projects. There are relatively few significant water quality data gaps affecting watershed or landscape analyses.

Ongoing Environmental Protection Agency efforts to set standards for turbidity could further affect workloads associated with several programs. Efforts to quantify instream water claims on the Klamath River are underway. The RMP/EIS modeled fewer treatment acres per year than some actual activities to date. More acres are being treated as a result of mortality salvage than had previously been modeled. However, the effect of these activities on soils and hydrologic function has been less than the modeled cumulative effect because mortality harvest creates less destructive surface disturbance per acre entered. Further, the acreage of riparian reserves modeled for treatment on both the east and west sides of the Resource Area were overestimated. Field reviews found substantially fewer miles of intermittent streams than originally estimated.

Addressing water quality problems, such as turbidity, may increase the complexity associated with RMP implementation planning for road construction and maintenance, soil and litter disturbance associated with all activities, selection of logging equipment, livestock grazing, and use of prescribed fire. Requirements of the Clean Water Act for non-point source pollution and waters included in the State's 303(d) list of affected waters, warrant a high degree of cooperation and planning where land management that could affect the attainment of water quality standards is proposed.

Preliminary information indicates the Best Management Practices (BMPs) adopted in the RMP, modified site treatments, and joint watershed management agreements for off-road-vehicle use are effective in designing implementation actions and reducing adverse effects. While there are many BMPs in the ROD that were written to achieve the objective of improving and/or maintaining soil productivity, four specific BMPs were reviewed for significant departures; ground based yarding; mechanical site preparation; broadcast burning on highly sensitive soils and road closures. In general, the district is adhering to their ROD with respect to these BMPs except for ground based yarding. The expanded use of excavators and mechanical harvesters in the district were not expected when the EIS was written. Preliminary monitoring results indicate that the district may be significantly departing from their BMP of limiting soil compaction to <12% of the harvest area by allowing the use of this equipment.

Road obliteration has not occurred on the district due to a lack of regeneration harvests. However, a road obliteration contract is going to be written to get some work done. The district needs to be aware that there is some disagreement between other districts about what it takes to obliterate a road and restore hydrologic function. Unlike tillage in a harvest unit to restore site productivity there isn't a set of specifications/guidelines available for consistent cross district

application of this BMP. A proposal has been forwarded to develop this guidance. Refer to the transportation section.

The Rangeland Management program provides livestock grazing activities on 208,000 of 213,000 acres in the Klamath Falls Resource Area. Grazing licenses authorize approximately 13,000 animal unit months (AUMs) on 95 grazing allotments (APS, pp. 55). The Bureau's Healthy Rangelands initiative and related standards and guidelines were incorporated into the RMP through plan maintenance. Completion of allotment assessments is expected to meet the Secretary's 10-year Healthy Rangelands implementation schedule. There have been no requests for grazing permits or leases, other than approximately 15 transfers from one user to another, in the last three years. Any grazing lease renewals or new requests or applications would be considered based on the RMP objectives and local resource conditions.

The Resource Area annual reports have provided Rangeland Program Summary data since the RMP completion. This data include progress in developing individual allotment management plans, rangeland improvements, adjustments or changes in allotment categorization, class of livestock, seasons of use, pasture use systems, temporary use, and use suspensions. Ecological site inventory data indicate rangeland conditions are generally good on 90 percent of the grazed lands surveyed, with most in late or better seral stages. Overall monitoring is appropriate and adequate. However, monitoring on custodial (low priority) allotments is minimal.

There have been no formal requests for adjustments of livestock forage for competitive forage use by big game by the Oregon Department of Fish and Wildlife. Mineral and salt lick areas were located away from streams and other wetlands. New water sources have been developed or proposed to further distribute livestock use on the Resource Area's eastside. Relatively few new livestock improvements have been proposed by the livestock industry (APS, pp. 57).

The Pokegama Wild Horse Herd has been monitored regularly as required (RMP/ROD, pp.64). Based on Bureau staff reviews, herd levels appear to be between 50-60 head, which is at or above the Appropriate Management Level of 30-50 head in the management plan (APS, pp. 54). Another roundup is anticipated to bring the herd within appropriate levels. There has been an informal request for adjustments of wild horse forage for competitive forage use by elk by the Oregon Department of Fish and Wildlife. Their request is tied to independent herd census information. One roundup was completed in 1996 and reduced the herd by 20 head to maintain thriving ecological condition of the herd.

**Conclusions and Recommended Follow-up:** The interdisciplinary review team concluded that, with the exception of the potential for unexpected soil compaction, the soils and water, hydrology, rangeland, and wild horse herd (resources) programs are consistent with the RMP and associated EIS for the first three years. Any deferrals or partial activity implementation completion is reasonable, given the stage of RMP implementation. Also, any deviations were rational, reasonable, and unlikely to have any unexpected significant adverse effects in the near term. In cooperation with other agencies and landowners, continue monitoring and data analysis to further determine effects of activities on overall soils and hydrologic function. Significant

changes and data required as a result of other federal, state and local government plans, programs, or policies were incorporated into applicable reports and analyses. Based on program monitoring, activity implementation, and this review, with the exception of the soil compaction concern related to timber salvage operations, no major changes in RMP program direction or practices appear to be warranted.

**8. Noxious Weeds**

Noxious weeds were addressed in the RMP/ROD (pp. 74) and multi-state programmatic EIS, the Statewide Noxious Weed Control Strategy, and subsequent 1993 Resource Area environmental assessment. These documents emphasize an integrated pest management approach. Noxious weeds are also addressed in Late-Successional Reserve and Watershed Assessments. In 1993, a weed inventory was conducted on 17,100 acres; treatment monitoring averages 100 acres per year (APS, pp. 52). There are increasing numbers of infested sites, as well as additional listed species, with seven new listed species found in 1998.

The majority of acres treated on BLM-managed lands are conducted with State-approved biological control agents and over multiple years. Biological control agent use is documented in Biological Control Application Proposals in an organized and accessible manner. Actual control activities are currently completed through the State of Oregon Department of Agriculture. Manual control is used where feasible, effective, and economical. There has been limited chemical weed control, averaging 140 acres per year, and any use is documented by the Resource Area on Pesticide Use Proposal forms. The need for additional chemical control agents still exists and alternative formulations might be more effective, less persistent and more economical. The weed program has focused on smaller, new infestations with biological agents used for the more broad-based infestations. Although not considered a noxious weed, Cheat grass and other invasive species may require chemical control in the future. These species are currently controlled by nonchemical means, unless listed as noxious by the State or County. Prescribed fire and controlled livestock grazing have not been used to control noxious weeds.

Pre-land acquisition weed inventory or pre-land-exchange control of noxious weed populations will be conducted as opportunities occur. Management of potential or known weed populations in authorized utility rights-of-way is being addressed by right-of-way permittees. There has been no need for seeding of former weed infested areas. Erosion control of disturbed areas is completed with certified weed-free seed. Use of nonnative perennial species, is avoided where alternative native grass and forb seed is available, cost effective and likely to succeed.

**Conclusions and Recommended Follow-up:** The interdisciplinary review team concluded that the Noxious Weed Control Program is consistent with the RMP and associated EIS for the first three years. Local data on weed infestations have been considered as appropriate and have not contradicted the RMP analytical assumptions, land use allocations, authorized resource uses or anticipated mitigation measures to a sufficient degree to warrant consideration of further analysis or a formal plan amendment or revision at this time. There are no significant changes required as

a result of other federal, state, local or tribal government plans, programs, or policies. No changes in program direction or practices appear to be warranted based on program monitoring, activity implementation or this review, although additional weeds may be listed and treated as appropriate.

**9. Rural Interface, Socioeconomic Conditions, Sold and Unawarded Timber Sale Effects, and Environmental Justice**

**Rural Interface:** The RMP/ROD (pp. 46) assumed that BLM would consider the interests of adjacent and nearby rural landowners, including residents, during analysis, planning, and monitoring related to managed rural interface areas. These interests include personal health and safety, improvements to property, and quality of life. The NEPA and activity planning processes are used to determine how landowners might be or are affected by activities on BLM-administered lands.

The Klamath Resource Area appears to be meeting the rural interface objectives and actions identified in the RMP (APS, pp. 35). Design features and mitigation measures to meet Visual Resource Management (VRM) III or higher objectives within 0.25 mile of mapped rural interface areas are the primary tools. The Klamath Resource Area does not have unmapped rural interface areas.

The current fire management plan includes risk reduction in rural interface areas. Resource Area staff reported that coordinating prescribed burning and harvesting activities in rural interface areas is difficult. The increasing number of adjacent landowners, density of dwellings, changing ownership, and continuing addition of subdivisions are among the issues to be considered when proposing prescribed fire and harvesting. Specific areas that have rural interface concerns are the Klamath Forest Estates and Stukel Mountain area.

The Resource Area staff is satisfied with the objective and action items identified by their RMP, believing they will continue to provide effective guidance into the future. Minor plan maintenance to update the rural interface area map and change the maximum lot size threshold to 40 acres is a possibility for the future, but not a high priority at this time. This change would increase the amount of Bureau-managed lands with management constraints designed to benefit adjacent private land owners. Increasing the rural interface area lot size threshold would occur only if monitoring results indicate the change is necessary.

The RMP did not discuss how resources on BLM-administered lands in the rural interface area may be at risk from people. The Resource Area identified rural interface lands as places where management problems such as unauthorized dumping, hazardous materials disposal, vandalism, wildlife harassment, and OHV damage are prevalent.

**Socioeconomic Conditions:** The RMP/ROD (pp.46) assumed the BLM would contribute to

local, state, national and international economies through sustainable use of BLM-managed lands and resources and use innovative contracting and other implementation strategies. To the extent consistent with authorities, the ROD assumed the BLM would provide amenities (such as recreation facilities, protected special areas, and high quality fisheries) that enhance communities as places to live, work, and visit.

The Klamath Falls Resource Area staff is involved with many local governmental and non-governmental groups. Partnerships have been critical for implementation of Wood River restoration projects (APS, pp. 36). The Klamath Basin Water Users Group has been especially supportive. The Resource Area staff continues to work on balancing acres as a follow-up to the Wood River exchange; currently more than half of the land to be sold is complete with additional parcels identified and waiting for private buyers. The Resource Area is one of the interagency members of the Klamath Basin Ecosystem Restoration Office. This group awards two million dollars annually for restoration on public and private lands.

The Resource Area is a member of the Klamath/Lake/Modoc Recreation Working Group–including participation in 'the answer people' information sharing round table for public contact people. Other activities include participation in juniper utilization and marketing studies underway; provision of search and rescue assistance to Klamath County; and management of a timber sale to improve the habitat on the USFWS Bear Valley Refuge.

Project work funded through Jobs-in-the-Woods (JITW) provided limited contracting opportunities in botany and archeology. JITW funding in contracts was as follows: FY96 ($15,082), FY97 ($65,238), and FY98 ($9,256). The Klamath Falls Resource Area continued to provide a diverse base of forest commodities for commercial and individual use. These included timber sales, firewood permits, grazing, numerous special forest products, and mineral materials. Predictable O&C payments were made to Klamath County in the amount specified by Public Law 103-66, as amended, commonly known as the "O&C safety net." Payments will continue under this law through 2003.

**Sold and Unawarded Timber Sales:** As of October 1, 1998, the Klamath Falls Resource Area had no timbers sales that were sold and unawarded to the high bidder.

**Environmental Justice:** Direction for consideration of environmental justice in Bureau authorized activities is derived from Executive Order 12898 of February 11, 1994, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, an accompanying Memorandum to Agency Heads, and CEQ Guidance issued February 1998. A retrospective look did not identify any programs, policies, or activities under the existing plan that have "disproportionately high or adverse human health or environmental effects ... on minority or low-income populations". Special forest products collection (see section 11) was identified by the District as an activity with high participation by minority and low-income populations. However, the Resource Area's contribution to special forest products represents only a small portion in the region. Future actions that may affect this activity may require additional outreach activities to comply with Executive Order 12898.

Preliminary analysis identified statistically higher populations of Native Americans and Hispanics in Klamath County. The poverty rate for Klamath County exceeded the statewide average.

**Conclusions and Recommended Follow-up:** The interdisciplinary review team concluded that the Rural Interface, Socioeconomic Conditions, and Environmental Justice program elements are consistent with the RMP and associated EIS for the first three years. Any deferrals or partial activity implementation completion is reasonable, given the stage of RMP implementation and any deviations were rational, reasonable and unlikely to have any unexpected significant adverse effects in the near-term. Local data have been considered as appropriate, and have not contradicted the RMP analytical assumptions, land use allocations, authorized resource uses or anticipated mitigation measures to a sufficient degree to warrant consideration of further analysis or a formal plan amendment or revision at this time. There are no significant changes required as a result of other federal, state, local or tribal government plans, programs, or policies. No changes in program direction or practices appear to be warranted based on program monitoring, activity implementation, or this review. Further monitoring of socioeconomic effects of actions will include consideration of possible effects under Executive Order 12898.

## 10. Air Quality, Wildfire and Fuels Management

The RMP air quality (RMP/ROD, pp. 27) restrictions for fire management and wildfire and fuels management direction (RMP/ROD, pp. 75) appears to still be appropriate (APS, pp. 19 and 58). In addition, fire plans were refined through Phase 1 and 2 Fire Planning in FY97-98 and may be further refined through the Interior Columbia Basin Ecosystem Management Project (ICBEMP). It is expected that the ICBEMP will provide supplemental guidance, which could effectively amend this portion of the RMP without a separate RMP amendment exercise. Joint projects have been completed with the Oregon Department of Fish and Wildlife and/or other cooperating agencies/groups, such as The Nature Conservancy, U.S. Army Corps of Engineers, or U.S. Fish and Wildlife Service. Rehabilitation reseeding, when needed, is with native species whenever possible, although crested wheat may be used in former seeded areas.

Under the approved RMP direction for Forest Health Restoration (RMP/ROD, pp.53), snags and down logs are left to provide shade, and salvage logging is limited to enhance natural reforestation, although specific standards and guidelines and other management direction may have been modified by local assessments, plans, or **EAWS**. Although the ICBEMP will address increased use of prescribed fire at the regional scale, supplemental analysis will not likely be required in this Resource Area beyond those already required under the Northwest Forest Plan. It is assumed that Oregon Department of Fish and Wildlife staff would be closely involved in these analyses, especially given public interest in "harvestable" levels of big game. Supplemental analyses of natural fire history, including frequency and intensity, have indicated that the fire frequency is about 5 to 60 years. As a result of the relatively frequent surface fires, on the eastside of the Resource Area, the natural snag density and the down log component may be

substantially less than anticipated in the Klamath Falls RMP. These units of measures are optimal for wildlife and aquatic management; however, for fire management, they are most often expressed as tons per acre (tpa); the crosswalks between figures are difficult, at best.

**Conclusions and Recommendations**: The interdisciplinary review team concluded that the Air Quality, and Wildfire and Fuels Management Program is consistent with the RMP and associated EIS for the first three years. Any deferrals or partial activity implementation completion is reasonable, given the stage of RMP implementation; also, any deviations were rational, reasonable, and unlikely to have any unexpected significant adverse effects in the near term. Local data have been considered as appropriate, and have not contradicted the RMP land use allocations, authorized resource uses, or anticipated mitigation measures to a sufficient degree to warrant consideration of further analysis or a formal plan amendment or revision at this time. There are no significant changes required as a result of other federal, state, local or tribal government plans, programs, or policies. No changes in program direction or practices appear to be warranted based on program monitoring, activity implementation, or this review.

## 11. Special Forest Products

The Klamath Falls RMP provides for production and sale of special forest and natural products when demand is present and actions are consistent with other objectives (ROD, pp.57). The program is also guided by the Special Forest Products Procedure Handbook, H-5400-2 (Release 5-245, dated 9/27/96). The FY 98 APS (pp.49-50 and Table 15) summarizes sale of fuelwood and other products. The Resource Area utilizes designated available commercial firewood sale areas. Other product interest includes small numbers of Christmas trees and a modest amount of willow cuttings and mushroom sales. Sales have been restricted due to availability of Forest Service cutting areas. Based on Resource Area estimates, monitoring was conducted on approximately 10% (or 8 sales) of the FY1998 small forest product sales through field checks.

**Conclusions and Recommended Follow-up:** The interdisciplinary review team concluded that the Special Forest Products program elements are consistent with the RMP and associated EIS for the first three years. However, there is a concern that the documentation substantiating the District's compliance with the RMP is lacking (see recommendations below). Any deferrals or partial activity implementation completion is reasonable, given the stage of RMP implementation; also, any deviations were rational, reasonable and unlikely to have any unexpected significant adverse effects in the near-term. Local data have been considered as appropriate, and have not contradicted the RMP analytical assumptions, land use allocations, authorized resource uses, or anticipated mitigation measures to a sufficient degree to warrant consideration of further analysis or a formal plan amendment or revision at this time. There are no significant changes required as a result of other federal, state, local or tribal government plans, programs, or policies.

It is recommended that the following changes be made in program direction or practices to help

substantiate the Resource Area's compliance with the ROD, to help determine long-term trends, and to suggest any additional studies or sales restrictions that may be needed:

- Document standards used to develop specific guidelines in a NEPA document.
- Document that specific guidelines have been included as part of the small forest product contracts by attaching the special provisions to the Resource Areas' main file copy of the contract, as well as the purchaser's copy.
- Develop and utilize a District monitoring form.
- Document results of monitoring through written inspection reports.

## 12. Timber Resources and Allowable Sale Quantity Analysis

Seven issues relating to the Timber Resources and Allowable Sale Quantity (ASQ) analysis were examined in the Klamath Falls Resource Area RMP evaluation. All are integral to the timber management program and also directly connected to the assessment of the recent past and potential ASQ. Each issue is identified in bold text as a sub-part of the overall (section 12) evaluation section and includes issue-related findings or recommendations. The figures referenced in the issue narratives are found at the end of this section, along with background information on the derivation of timber sale and ASQ data, and ASQ accounting and reconciliation.

During the evaluation period, the Klamath Falls Resource Area experienced tree mortality of epidemic proportions with degraded forest health due to drought and associated insect attacks. Due to the short-term forest health conditions, the primary emphasis of the forest management program has been to treat high priority areas for recovery of dead and dying trees and to manage stand density for forest health objectives. These objectives are set forth in the Timber Resources Section of the RMP (pp. 55): 1) managing timber stands to reduce the risk of stand loss from fires, animals, insects, and disease; 2) manage developing stands to promote tree survival and growth; and 3) provide for salvage harvest of timber killed or damaged by events such as wildfire, windstorm, insects or disease, consistent with management objective of other resources. The Third Year Evaluation used the first decade ASQ modeling projections in the RMP as a "yardstick" to assess the ASQ. ASQ projections are long term in nature. The short-term departures from modeling assumptions to apply adaptive management in response to forest health conditions should not affect long-term ASQ projections.

The RMP segregates the Resource Area lands as "westside" for lands within the Northwest Forest Plan (NFP) area versus "eastside" for lands outside of the NFP area. For purposes of the evaluation of ASQ, the westside and eastside lands have been grouped and summarized together, unless otherwise indicated.

**ASQ Modeling:** The RMP ASQ was calculated using the TRIM-PLUS harvest scheduling model. The model simulates growth and sustainable harvest based on assumptions for growth and yield and the types of forest available for harvest. The modeling assumptions attempt to

match the management action/direction and expected level of timber management activity under the RMP. However, the ASQ modeling reflects only a set of stand conditions and assumptions for growth and harvest under a full compliment of treatments. The RMPs and variability in forest conditions offer greater latitude in applying prescriptions and timing harvests while still meeting timber resource objectives.

**ASQ Variability:** The RMP stated that the ASQ may deviate by as much as 40 percent from the declared ASQ due to uncertainties associated with the complex nature of the management actions/direction. The knowledge gained through inventory, watershed analysis, and site specific planning that conforms with management action/direction will help refine the ASQ. Deviations from estimated first decade levels of timber management activity in the FEIS do not necessarily equate with departures from the RMP management action/direction. Departures from the estimated annual first decade levels of timber management activity in the RMP FEIS and other implementation assumptions must be assessed in terms of RMP objectives and anticipated environmental consequences.

**Terminology:**

**Evaluation Period** - Date of approval of the RMP through the end FY 1998.

**Harvest Land Base -** The lands available for harvest under the District RMP are the Southern General Forest Management Area (GFMA) land use allocation, and within the designated Key Watersheds which overlay the GFMA. The harvest land base is composed of the net available acres of suitable commercial forest land on which the ASQ calculation, using the TRIM-PLUS model, is based. Volume from the harvest land base is called chargeable volume as it is charged towards or against (a credit) the ASQ level declared in the RMP. The GFMA equates to the Northwest Forest Plan Matrix land use allocation.

**RMP Sales** - The sales located in the Harvest Land Base comprised of net merchantable (chargeable) timber volume sold during the evaluation period.

## 12-A. Green Tree Retention

Green tree retention applies only to the regeneration harvest prescription. No regeneration harvest occurred during the evaluation period. During the evaluation, a need was noted to clarify the wording in the RMP for green tree retention to be consistent with the Medford District Southern GFMA RMP language. Both district RMPs incorporate the same Southern GFMA land use allocation with an original intent that the associated Standards and Guidelines would be consistent.

### 12-A Conclusion and Recommended Follow-Up

1. Plan maintenance is recommended to clarify that green tree retention applies to regeneration harvest in the Resource Area and be consistent with the Medford District Southern GFMA language.

## 12-B. Mix of Age Classes Harvested

Figure 12-2 displays the overall age class distribution for the Resource Area with the amounts in reserves and the harvest land base. Figure 12-3 displays the amounts of timber sold by age class for each harvest type compared with the modeled first decade projections. Refer to Figure 12-4 for additional data on age classes and harvest types.

Age class data is displayed for information only and to be consistent with the other Western Oregon District Third Year Evaluations. Age class has limited utility when the primary sale prescriptions are density management and mortality salvage under uneven age forest management conditions.

The total acreage figure of mortality salvage was estimated because information on the specific age classes in which this type of sale occurred was not available. The total acres were prorated proportionally across the age classes in the harvest land base for age classes 40 and older. The RMP modeling assumed that this type of sale occurred proportionally across the range of age classes. This was validated by the Resource Area during the evaluation.

Discussion of the individual sale types by harvest prescription is covered in the next issue (12-C. Mix of Harvest Types).

### 12-B Conclusion and Recommended Follow-Up

1. No changes in program direction or practices appear to be warranted based on program monitoring, activity implementation, or this review.

## 12-C. Mix of Harvest Types - Volume and Acreage

Figure12-5 displays the mix of harvest types (acres and volumes) achieved with the RMP Sales compared with the first decade ASQ harvest scheduling assumptions.

Regeneration harvest did not occur during the evaluation period due to the emphasis in treating high priority forest health conditions. Future regeneration harvest opportunities in these areas have not been precluded.

Although density management sale acreage was higher than first decade modeling assumptions, the volume sold was lower. Treatment for forest health conditions is the primary reason for the increase in acreage sold. Density management treatments are beneficial in preventing further mortality and the improvement of overall forest health. Harvest treatments in stands with a dead and dying component may also contribute to lower volume than projected.

Mortality Salvage was not part of the long-term ASQ modeling projections. The Resource Area staff indicated that it appears the mortality salvage treatment needs will taper off, enabling a shift to regeneration harvest in the future.

### 12-C Conclusion and Recommended Follow-Up

1. Increase the level of regeneration sales to approach the decadal projections to the degree possible recognizing the higher priorities of forest health and mortality salvage.

2. Prior to a Subsequent Evaluation, the Resource Area is to:

    a. Examine their assumptions in their density management harvest prescriptions and yield curves to determine any need for revisions.

    b. Conduct further Current Vegetation Survey-based inventory to evaluate and redevelop yield projections as appropriate.

    c. Monitor needed levels of mortality salvage and density management/forest health treatments needed. If necessary levels of mortality salvage and density management are expected to continue to exceed RMP projected levels, analyze effects, if any, on the sustainability of the ASQ and attainability of RMP objectives, as well as the environmental effects in relation to those assumed in the RMP.

## 12-D. Harvest Across Land Use Allocations - Volume and Acreage

Figure 12-6 displays the total acres and volumes sold during the evaluation period from the Matrix LUA. The figure combines the Southern GFMA (which occurs on the westside), as well as the eastside area (which is outside the NFP area). Refer to Figure 12-7 for additional data.

The acres treated were higher than modeled projections. Mortality Salvage was not part of the ASQ modeling projections. Mortality Salvage comprised 67 percent of the acres treated. Volume sold for the Matrix LUA is consistent with the evaluation period portion of the projected decadal ASQ. The departure from modeled acreage assumptions was due to treatment of stands to improve forest health conditions and capture mortality volume.

### 12-D Conclusion and Recommended Follow-Up

1. Refer to the Recommended Follow-Up 12-C - Mix of Harvest Types.

## 12-E. Harvest Across Land Use Allocations - Key Watersheds

Figure 12-8 provides information about the ASQ associated with the Key Watersheds. The RMP assumed that 49 percent of the Resource Area's ASQ would come from the Key Watersheds. The NFP directed that the ASQ from the Key Watersheds is to be non-interchangeable with the ASQ outside of Key Watersheds. The portion of the Key Watershed contribution towards the district ASQ is based on the first decade ASQ modeling projection. The measure of balance for the non-interchangeable volume component is based on this same decadal time fame. Sale volume sold

during the evaluation period inside the Key Watershed represents 68 percent of the decadal projected amount. Outside Key Watersheds, there was 49 percent less volume sold than projected. Acreage sold within the Key Watersheds has exceeded modeling assumptions; however, the acreage was treated with a "light touch" mortality salvage/density management type of prescription. This "lighter touch" prescription removes less volume per acre than the Southern GFMA prescription modeled in the RMP. These increased levels (acres treated) are based on the need to treat stands to improve forest health and to recover widespread mortality.

### 12-E Conclusion and Recommended Follow-Up

1. No ASQ adjustment is needed at this time. There is no information to indicate that the departures identified in the evaluation period, as mitigated by the recommended follow-up action, would alter RMP conclusions or substantively change the anticipated environmental consequences of the RMP.

2. Over the remainder of the decade assure that the volume sold inside and outside the Key Watersheds is within the ASQ levels attributable to the respective harvestable land bases in order to meets the non-interchangeable component of the RMP and NFP. If this does not appear feasible, refer to the conclusions and recommendations for Issue 12-C - Mix of Harvest Types and expand this analysis to include the levels of mortality salvage and density management treatments needed in relation to the non-interchangeability requirement. If it is anticipated that decadal projections would be exceeded for harvest within the Key Watershed the results of the above analysis should be submitted to Regional Ecosystem Office for issue resolution.

### 12-F. Harvest Across Land Use Allocations - Volume From Reserves

During the evaluation period, a number of sales were sold from the reserves. These sales do not count as chargeable volume towards the ASQ, nor were any reserve acres included as harvest land base acres in the TRIM-PLUS ASQ calculation. Sales from reserves are conducted to promote the attainment of RMP reserve objectives including the attainment of Aquatic Conservation Strategy objectives. The following table displays the acres sold from reserves during the evaluation period:

| **Type of Reserve** | **Acres Sold** |
|---|---|
| Late-Successional Reserves | 0 |
| Riparian Reserves | 62 |
| **Total** | **62** |

Page 1 of Figure 12-1 indicates 289 MBF of non-chargeable volume was sold during the evaluation period. The RMP anticipated timber harvest in Riparian Reserves to meet the objectives of the Aquatic Conservation Strategy. However, there was no assertion of an anticipated level of activity in the RMP. Sales in reserves proceed when they conform to Aquatic Conservation Strategy objectives and other reserve management actions/direction. For the sale

activity that occurred during the evaluation period, the project-level environmental assessments included a Finding of No Significant Impact.

### 12-F Conclusions and Recommended Follow-Up

1. Refer to the conclusions and recommendations for Issue 12-C - Mix of Harvest Types and expand this analysis to include a determination of the approximate levels of treatment opportunities in the reserves.

## 12-G. Changes to Harvest Land Base Reserves and Deferrals

The Resource Area identified the following small changes to the harvest land base, reserves, and deferrals during the evaluation period:

### Wildlife and Special Status Species

The RMP ASQ modeling assumed approximately 1,718 total acres were reserved for the northern spotted owl core areas, specifically the reserve around core areas identified before January 1, 1994. There was no substantial change in the harvest land base acreage during the evaluation period resulting from areas identified as reserves for northern spotted owls. Revisions were made to the mapping of these reserves, which now total approximately 1,552 acres.

There was no change in the harvest land base acreage during the evaluation period resulting from management of sites for Survey and Manage species. In the RMP ASQ modeling, there was no reduction in the harvest land base for Survey and Manage species. (Note: During the evaluation period the data tracking tools were not fully implemented for mapping the sites to be managed for Survey and Manage species. The acres identified in the evaluation may not reflect a complete accounting of sites that may have been deferred from harvest for the management of known sites.)

### Late-Successional Forest - 15% Standard & Guide

Interagency guidance on the implementation of the 15% Standard and Guideline (S&G) was issued during the evaluation period. Although the RMP assumptions included an assessment for the 15% S&G, this assessment was conducted prior to the designation of interagency fifth field watersheds and prior to the issuance of the interagency implementation guidance. The RMP ASQ modeling assumed that no acres would be deferred from harvest. The Resource Area's assessment of the 15% S&G under the interagency guidance has resulted in harvest deferral on approximately 750 acres.

### 12-G Conclusions and Recommended Follow-Up

1. On an individual issue basis these changes to the harvest land base are not of sufficient magnitude to warrant a recalculation of the ASQ at this time. Individual

issue estimates that are incorporated in the ASQ have an inherent range of uncertainty. A recalculation based upon such small acre shifts on individual issues basis exceed the sensitivity of the TRIM-PLUS ASQ model and would not result in a different ASQ. Continue to monitor these changes to the harvest land base, tallying any positive and negative acreage changes for a Subsequent Evaluation to determine if any of the changes become substantive.

2. ASQ adjustments for reductions to the harvest land base for the management of Survey and Manage known sites will be considered after the completion of the ongoing Survey and Manage EIS.

3. The cumulative effects of minor changes in the harvest land base and management assumptions will be incorporated into the ASQ when 1) changed circumstance identifies a sufficient magnitude of change to warrant a recalculation; or 2) an update of the base ASQ data will permit a revised ASQ calculation with a completely revised data set.

**Summary of ASQ Conclusions, Recommended Follow-Up, and Reconciliation**:

No issues have been identified during the evaluation period which would warrant a recalculation of the ASQ. Page 2 of Figure 12-1 contains an available cut calculation which accounts for ASQ accomplishments during the evaluation period and reconciles them with the decadal ASQ levels (refer to Timber Resources and Allowable Sale Quantity Analysis below). This calculation reconciles (eastside plus westside) the 2.8 MMBF (0.4 MMCF) figure by which the planned ASQ of 21.1 MMBF (3.7 MMCF) for the evaluation period was exceeded by the 23.8 MMBF (4.1 MMCF) of volume actually sold. Based on this reconciliation, the ASQ for the remainder of the decade (commencing in FY 1999 and pending any differing findings from a subsequent Evaluation) will be 5.5 MMBF (0.97 MMCF) on the westside and 0.3 MMBF (0.08 MMCF) on the eastside.

# A Detailed Explanation of the Timber Resources and Allowable Sale Quantity Analysis

**Derivation of Timber Sale and Allowable Sale Quantity Data:** The data used in the Third Year Evaluation analysis and in the preparation of the findings was derived from two sources: the Timber Sale Information System (TSIS) and the Timber Sale Automated Record System (TSARS). TSIS is the Bureau's timber sale accomplishment and accounting database. TSARS is the geographic information system timber sale area theme designed and used only in western Oregon for timber sale planning and analysis purposes. For analysis purposes, the data from TSIS and TSARS was reconciled to the degree possible. However, the data between the two systems could not be aligned absolutely side-by-side because TSARS does not always include all miscellaneous volume that does not have a spatial (acreage) component, such as small negotiated sales (e.g., road side salvage) and certain timber sale contract modifications.

The data presented and discussed in Section 12 of the supporting document was provided and verified by the Resource Area. This process continued throughout the evaluation up to the preparation of these findings. This verification and the aforementioned reconciliation of the data between TSIS and TSARS revealed some differences in the base data. Therefore, there are some inconsistencies between the data in these findings and those displayed in the Resource Area Annual Program Summary completed in February 1999.

Aside from the data associated with the Klamath Falls Resource Area Allowable Sale Quantity Accomplishments and Reconciliation (Figure 12-1), the data and graphics displayed in Section 12 of the supporting document are intended to show general trends versus providing a reporting of accomplishments. These data and graphics are displayed to support the analysis of ASQ issues to show quantitative comparisons of the objectives and modeling assumed in the RMP with the actual implementation of the RMP in FYs 1995-1998. This will serve as a basis for determining if changed circumstances or new information have resulted in substantially different outcomes than were assumed in the RMP.

The ASQ was calculated and declared in cubic feet versus board feet. Beginning in October 1998, all BLM timber sales were measured and sold based on cubic feet. BLM continues to also report accomplishments in board feet and for simplicity will utilize board feet as the primary discussion measure in this evaluation. However, the official ASQ accounting is in cubic feet for which data is also displayed in Figure 12-1. Supporting data for this Figure is available in the Resource Area Office.

Data from TSIS was used to prepare Figure 12-1, which displays data from all chargeable and non-chargeable timber sales and miscellaneous volume sold by advertised or negotiated sales, or contract modifications since the approval date of the RMP. The timber sale volume that is chargeable towards the ASQ comes from the harvest land base, which are lands available for harvest under the Resource Area RMP Southern General Forest Management Area (GFMA) land use allocation (LUA), and within the Key Watersheds which overlay the GFMA. The harvest land base is composed of the net available acres of suitable commercial forest land on which the ASQ

calculation, using the TRIM-PLUS model, is based. Volume from the harvest land base is called chargeable volume as it is charged towards or against (a credit) the ASQ level declared in the RMP. The GFMA equates to the Northwest Forest Plan Matrix land use allocation.

TSARS includes all advertised and negotiated timber sales (with a spatial component) sold from the approval date of the RMP through the end of FY 1998. The original sold/unawarded timber sales from FYs 1990 and 1991 that were awarded in accordance with Section 2001(k)(1) of the 1995 Rescissions Act (PL 104-19) and replacement volume sales awarded in accordance with Section 2001(k)(3) of the Act are also displayed in TSARS. However, only the RMP Sales from the harvest land base and certain Rescissions Act replacement volume timber sales (referred to as "RMP Sales;" see further discussion below in ASQ Accounting and Reconciliation) from the harvest land base are chargeable and comprise the data used in comparing actual accomplishments in the harvest land base with the RMP objectives, management action/direction, and modeling assumptions underlying the ASQ calculation.

**ASQ Accounting and Reconciliation:** In the ASQ accounting, FY 1995 data was included for the portion of the FY from the Resource Area's date of approval of their RMP, i.e., June 2, 1995. The volume that counted from FY 1995 was that with a sale date in TSIS that was on or after the RMP approval date. This portion of FY 1995 plus FYs 1996-1998 is referred to as the evaluation period.

The following net merchantable timber volume (RMP Sales) from the evaluation period was considered chargeable for the ASQ accomplishment data and reconciliation (Figure 12-1):

1. All sold RMP advertised and negotiated timber sales from the harvest land base.
2. All positive and negative volume from timber sale contract modifications to sold RMP advertised and negotiated timber sales from the harvest land base. Any negative volume modifications are a debit.
3. All positive volume timber sale contract modifications to pre-RMP [including Rescissions Act Section 2001(k)(1) sales] advertised and negotiated sales from the harvest land base.
4. All short form (Form 5450-5) negotiated sawlog timber sales form the harvest land base.
5. Certain Rescissions Act Section 2001(k)(3) replacement volume timber sale units that meet the test of resulting in a net depletion of harvest land base acres in a Sustained Yield Unit (SYU). Section 2001(k)(3) of the Act required BLM to provide replacement volume for Section 2001(k)(1) sale units when, in accordance with Section 2001(k)(2), a Section 2001(k)(1) sale unit could not be released due to the known nesting of threatened or endangered bird species. Where use of harvest land base acres for replacement volume resulted in a net depletion of acres in an SYU, some base acres that otherwise would have been available for ASQ chargeable volume sales were actually depleted. Therefore, this replacement volume could not be legitimately excluded from the chargeable volume total.

The procedure for an available cut calculation and a sample calculation are found in the Oregon Timber Sale Handbook H-5410-1. This calculation is used to compute the planned level of timber sale offering in any given year during the life of an approved land use plan. It uses the

declared ASQ level for the subject year and adjusts for past year differences between the planned timber sale offerings and actual chargeable timber sales sold. For purposes of their available cut calculation, 9.33 years was used by the Resource Area for the number of years in the decade. A "decade" of 9.33 years results because the beginning of the decade was truncated by virtue of the RMP approval date occurring in the middle of Fiscal Year 1995. To calculate the total volume that "should" (assuming full implementation was possible) have been offered, the Resource Area's annual ASQ is multiplied by the 9.33 years in the first "decade" (minus 6 years). For the Klamath Falls Resource Area, the total allowable westside ASQ accomplishment at the end of FY 1998, assuming full implementation, is 3.43 million cubic feet (MMCF) (derived by taking 9.33 years minus 6 years and multiplying that result by 1.03 MMCF). The equivalent board foot figure is 19.7 million board feet (MMBF). The actual total westside chargeable volume sold by the Resource Area in the first 3.33 years of RMP implementation was 38.1 MMCF (22.1 MMBF).

On the eastside, the total volume that should have been offered, assuming full implementation, is 0.266 MMCF (derived by taking 9.33 years minus 6 years, and multiplying that product by 0.08 MMCF). The equivalent board foot figure is 1.33 MMBF. The actual total eastside chargeable volume sold by the Resource Area in the first 3.33 years of RMP implementation was 0.295 MMCF (1.74 MMBF).

**Figure 12-1** (Page 1 of 2)

**LAKEVIEW DISTRICT - KLAMATH FALLS RESOURCE AREA (KFRA)**
**ALLOWABLE SALE QUALITY (ASQ) ACCOMPLISHMENTS - BY SUSTAINED YIELD UNIT**

| **Evaluation Period: FY 1995 thru FY 1998** **1 (6/2/95 thru 9/30/98) | | **WESTSIDE KFRA/KLAMATH SYU** | | **EASTSIDE** | | **District** | |
|---|---|---|---|---|---|---|---|
| | | **CCF** | **MBF** | **CCF** | **MBF** | **CCF** | **MBF** |
| **ASQ Volume** **2 | **Advertised & Sold** | 31,129 | 17,951 | 0 | 0 | 31,129 | 17,951 |
| | **Negotiated** | 170 | 100 | 577 | 350 | 747 | 450 |
| | **Modification** | 6,715 | 3,968 | 2,370 | 1,384 | 9,085 | 5,352 |
| | **5450-5 (Short form)** | 82 | 47 | 6 | 4 | 88 | 51 |
| | **Totals:** | **38,096** | **22,066** | **2,953** | **1,738** | **41,049** | **23,804** |
| Autonomous Program Summaries **5: | Rescissions Act Replacement | 0 | 0 | 0 | 0 | 0 | 0 |
| | Key Watershed | 31,697 | 18,769 | 0 | 0 | 31,697 | 18,769 |
| | 5900 (Salvage/Forest Health) | 37,913 | 21,960 | 2,953 | 1,738 | 40,866 | 23,698 |
| **Planned Total ASQ for FY95-FY98 **3** | | **34,299** | **19,680** | **2,664** | **1,332** | **36,963** | **21,012** |
| **Planned ASQ for Key Watersheds for FY95-98 **3** | | 18,878 | 10,832 | N/A | N/A | 18,878 | 10,832 |
| **Non - ASQ Volume** | **Advertised & Sold** | 441 | 245 | 0 | 0 | 441 | 245 |
| | **Negotiated** | 0 | 0 | 0 | 0 | 0 | 0 |
| | **Modification** | 72 | 44 | 0 | 0 | 72 | 44 |
| | **5450-5 (Short form)** | 0 | 0 | 0 | 0 | 0 | 0 |
| | **Totals:** | **513** | **289** | **0** | **0** | **513** | **289** |
| Autonomous Program Summaries **5: | Rescissions Act Replacement | 0 | 0 | 0 | 0 | 0 | 0 |
| | Key Watershed | 406 | 232 | 0 | 0 | 406 | 232 |
| | 5900 (Salvage/Forest Health) | 403 | 230 | 0 | 0 | 403 | 230 |
| **All Volume (ASQ + Non-ASQ)** | **Advertised & Sold** | 31,570 | 18,196 | 0 | 0 | 31,570 | 18,196 |
| | **Negotiated** | 170 | 100 | 577 | 350 | 747 | 450 |
| | **Modification** | 6,787 | 4,012 | 2,370 | 1,384 | 9,157 | 5,396 |
| | **5450-5 (Short form)** | 82 | 47 | 6 | 4 | 88 | 51 |
| | **Grand Totals:** | **38,609** | **22,355** | **2,953** | **1,738** | **41,562** | **24,093** |
| Autonomous Program Summaries **5: | Rescissions Act Replacement | 0 | 0 | 0 | 0 | 0 | 0 |
| | Key Watershed | 32,103 | 19,001 | 0 | 0 | 32,103 | 19,001 |
| | 5900 (Salvage/Forest Health) | 38,316 | 22,190 | 2,953 | 1,738 | 41,269 | 23,928 |

**1 FY 1995 thru FY1998 is defined as the period from the signing of the Lakeview-Klamath Falls Resource Area ROD thru the end of FY 98 (6/2/95 thru 9/30/98 = 3.33 years).
**2 Volume from the Harvest Land Base that "counts" (is chargeable) towards Allowable Sale Quality (ASQ) accomplishment.
**3 Proportioned for the 3rd Year Evaluation Period (3.33 years x Annual RMP Targets).
**5 Autonomous Program Summary figures are for information purposes and are included in the ASQ and/or Non-ASQ figures, respectively. No Rescissions Act replacement volume was provided.

**Figure 12-1** (Page 2 of 2)

**LAKEVIEW DISTRICT - KLAMATH FALLS RESOURCE AREA (KFRA)**

**ALLOWABLE SALE QUALITY (ASQ) RECONCILIATION (AVAILABLE HARVEST CALCULATION) - BY SUSTAINED YIELD UNIT**

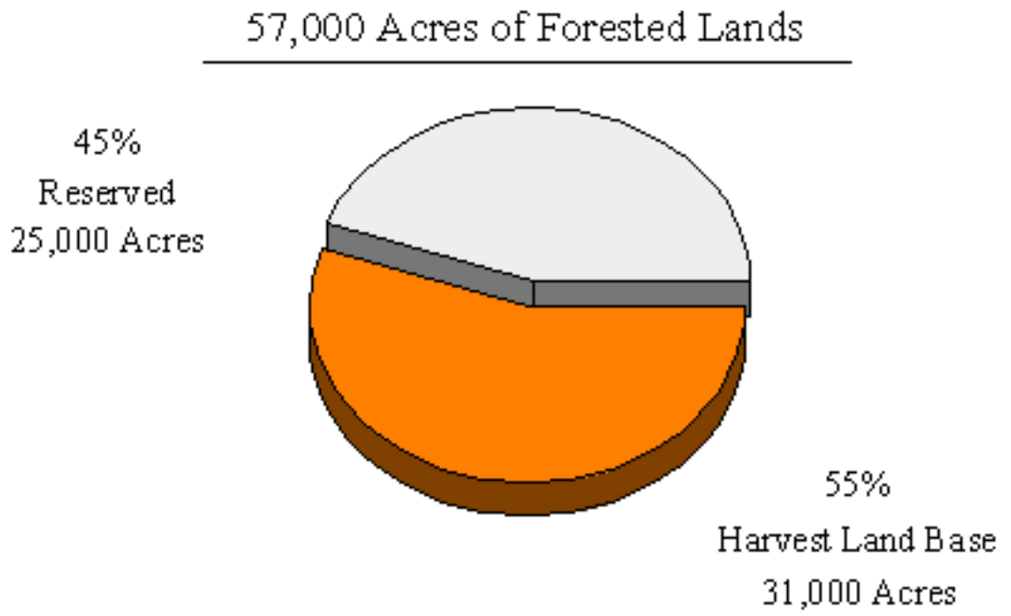
| **Evaluation Period: FY 1995 thru FY 1998** **1 (6/2/95 thru 9/30 98) | **WESTSIDE KFRA/KLMATH SYU** | | **EASTSIDE** | | **DISTRICT** | |
|---|---|---|---|---|---|---|
| | **CCF** | **MBF** | **CCF** | **MBF** | **CCF** | **MBF** |
| **Total ASQ Adjustment Summary:** | | | | | | |
| Decadal RMP Target ASQ Volumes: **4 | 96,099 | 55,140 | 7,464 | 3,732 | N/A | N/A |
| Annual RMP Target ASQ thru FY 2004: | 10,300 | 5,910 | 800 | 400 | N/A | N/A |
| Annual Average ASQ FY 1995 thru FY 1998: | 11,440 | 6,626 | 887 | 522 | N/A | N/A |
| **Adjusted Annual Target ASQ FY 1999 to FY 2004** | 9,667 | 5,512 | 752 | 332 | N/A | N/A |
| **Key Watershed (KW) Non-interchangeable ASQ Adjustment Summary:** | | | | | | |
| Decadal KW RMP Target ASQ Volumes: **4 | 52,890.0 | 30,350.0 | N/A | N/A | N/A | N/A |
| Annual KW RMP Target ASQ thru FY 2004: | 5,669 | 3,253 | N/A | N/A | N/A | N/A |
| Annual Average KW ASQ FY 1995 thru FY 1998 | 9,519 | 5,636 | N/A | N/A | N/A | N/A |
| **Adjusted Annual KW Target ASQ FY 1999 to FY 2004** | 3,532 | 1,930 | N/A | N/A | N/A | na |

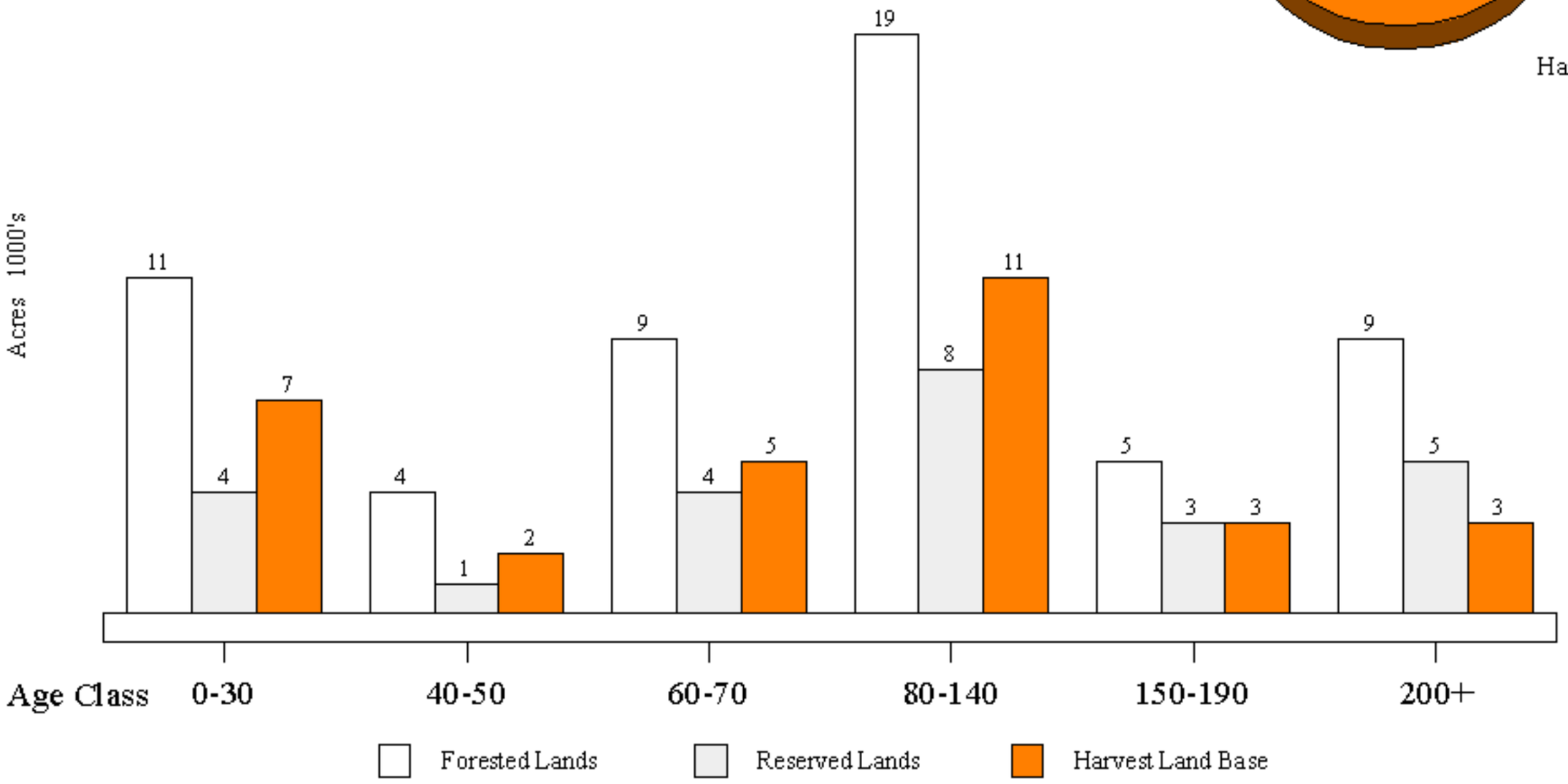
**1 FY 95 thru FY 98 is defined as the period from the signing of the Lakeview District - Klamath Falls Resource Area ROD thru the end of FY 98 (6/2/95 thru 9/30/98 = 3.33 years).

**4 Decadal RMP Targets are based on the period from the signing of the District ROD thru FY 2004; 9.33 years (for the Lakeview District - Klamath Falls Resource Area) x Annual RMP Targets.

# Klamath Falls - Age Class Distribution

Forest, Reserve, & Harvest Land Base



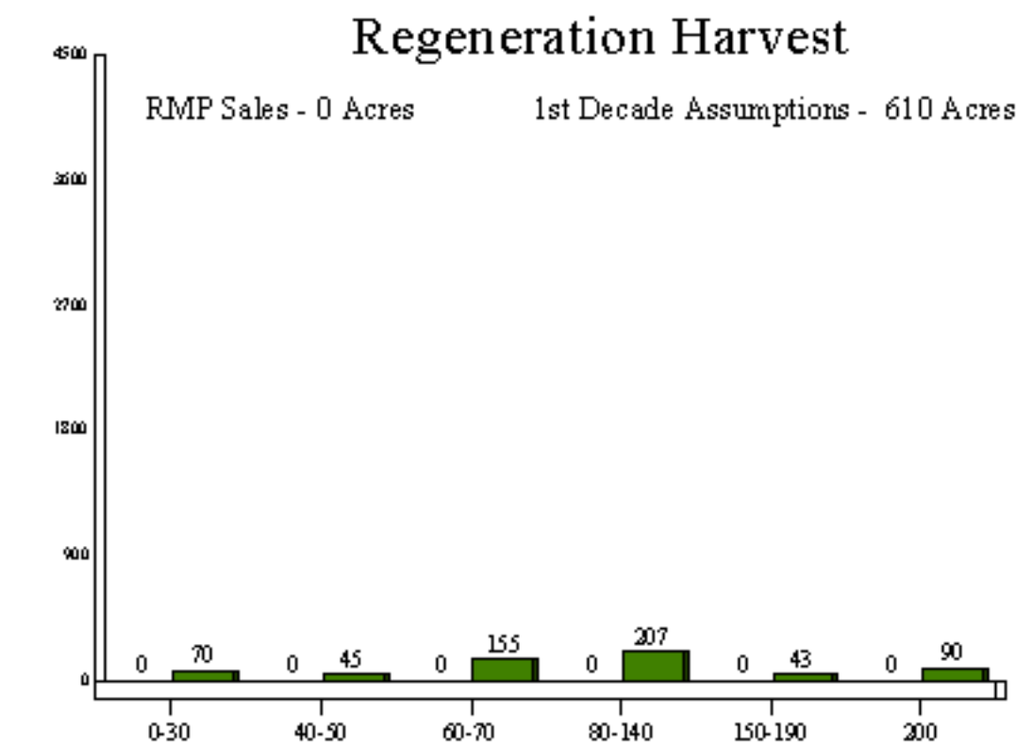



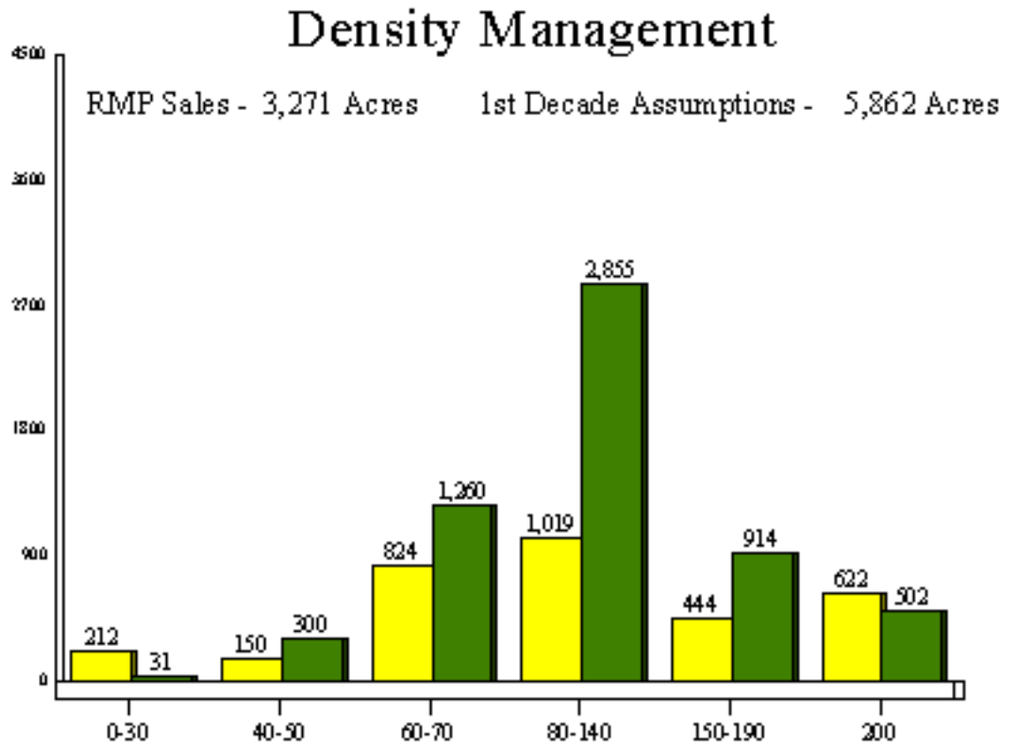

Note: Includes both east and westside data.

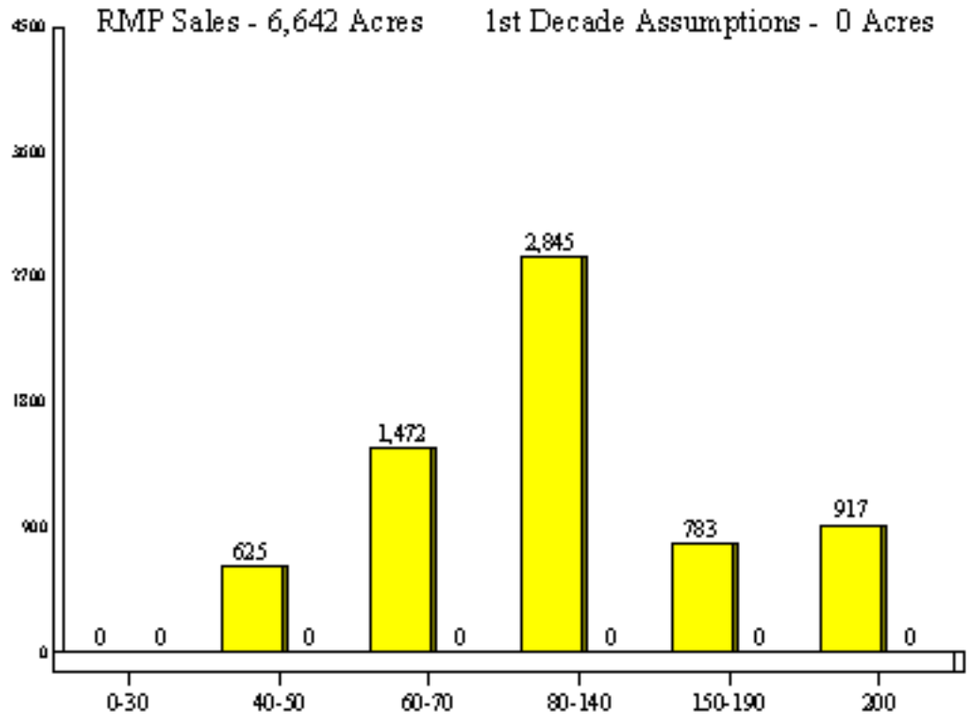
May 1999

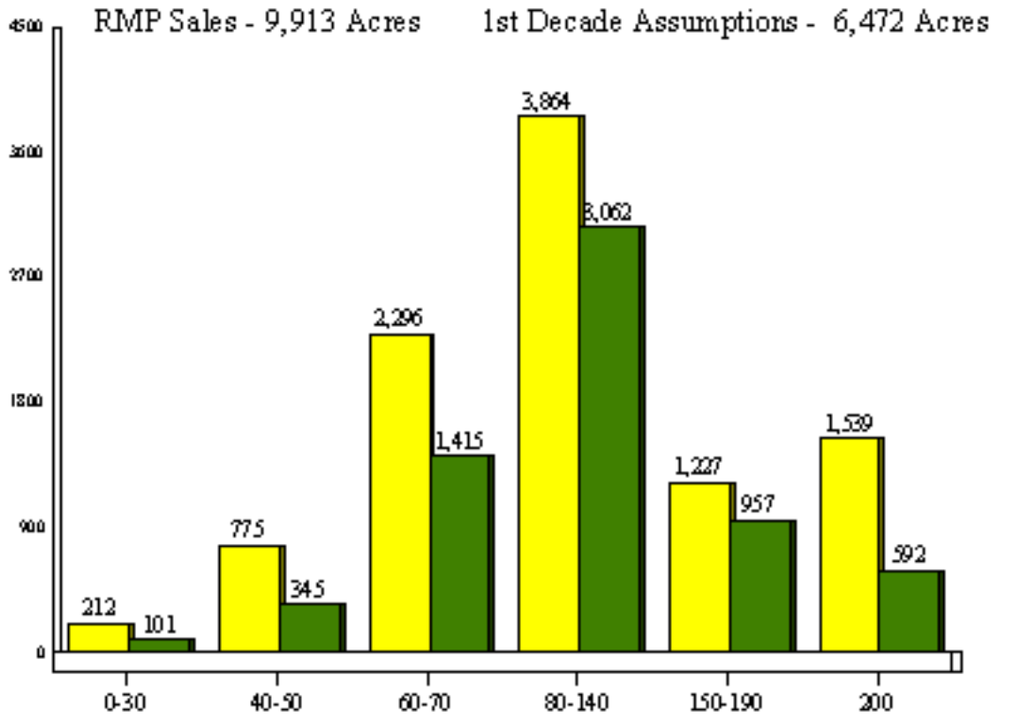
# Klamath Falls

## RMP Sales - Age Classes Harvested Compared With First Decade Modeling Assumptions




* Acres of Mortality salvage distributed proportialy across the age classes to represent the range of stands harvested.

Note: All figures includes both east and westside data.

**Figure 12-4**

# Klamath Falls Resource Area - Age Class and Harvest Types
# Forest, Reserve, and Harvest Land Base Acreage
# RMP Timber Sales Compared with First Decade RMP ASQ Modeling
# Acres and Volume (Millions Board Feet - MMBF)

| | | | | Total All Harvest Types | | | | Regeneration Harvest | | | | Density Management | | | | Commercial Thinning | | | | Other - Mortality Salvage | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | RMP Sales | | Modeling | | RMP Sales | | Modeling | | RMP Sales | | Modeling | | RMP Sales | | Modeling | | RMP Sales | | Modeling | |
| Age Class | Forest Land Base | Reserve Land Base | Harvest Land Base | Acres | Volume | Acres | Volume | Acres | Volume | Acres | Volume | Acres | Volume | Acres | Volume | Acres | Volume | Acres | Volume | Acres | Volume | Acres | Volume |
| 0-30 | 10,611 | 4,019 | 6,592 | 212 | 0.5 | 101 | 2.5 | 0 | 0.0 | 70 | 2.4 | 212 | 0.5 | 31 | 0.1 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0 |
| 40 | 1,701 | 609 | 1,092 | 366 | 0.6 | 94 | 0.4 | 0 | 0.0 | 5 | 0.2 | 73 | 0.0 | 89 | 0.2 | 0 | 0.0 | 0 | 0.0 | 293 | 0.6 | 0 | 0 |
| 50 | 2,019 | 783 | 1,236 | 409 | 0.9 | 251 | 2.0 | 0 | 0.0 | 40 | 1.3 | 77 | 0.3 | 211 | 0.7 | 0 | 0.0 | 0 | 0.0 | 332 | 0.6 | 0 | 0 |
| 60 | 3,828 | 1,556 | 2,272 | 800 | 1.6 | 373 | 3.4 | 0 | 0.0 | 36 | 1.8 | 190 | 0.4 | 337 | 1.6 | 0 | 0.0 | 0 | 0.0 | 610 | 1.2 | 0 | 0 |
| 70 | 5,649 | 2,437 | 3,212 | 1,496 | 3.3 | 1,042 | 12.9 | 0 | 0.0 | 119 | 4.0 | 634 | 1.6 | 923 | 8.9 | 0 | 0.0 | 0 | 0.0 | 862 | 1.7 | 0 | 0 |
| 80 | 6,164 | 2,482 | 3,682 | 1,428 | 3.5 | 1,145 | 11.5 | 0 | 0.0 | 52 | 1.2 | 439 | 1.5 | 1,093 | 10.3 | 0 | 0.0 | 0 | 0.0 | 989 | 1.9 | 0 | 0 |
| 90 | 4,599 | 2,106 | 2,493 | 928 | 2.7 | 576 | 5.2 | 0 | 0.0 | 38 | 1.3 | 259 | 1.4 | 538 | 3.9 | 0 | 0.0 | 0 | 0.0 | 669 | 1.3 | 0 | 0 |
| 100 | 3,168 | 1,413 | 1,755 | 583 | 1.6 | 465 | 2.9 | 0 | 0.0 | 39 | 0.9 | 112 | 0.6 | 426 | 1.9 | 0 | 0.0 | 0 | 0.0 | 471 | 0.9 | 0 | 0 |
| 110 | 1,712 | 758 | 954 | 428 | 0.8 | 181 | 1.0 | 0 | 0.0 | 7 | 0.2 | 172 | 0.3 | 174 | 0.8 | 0 | 0.0 | 0 | 0.0 | 256 | 0.5 | 0 | 0 |
| 120 | 1,367 | 646 | 721 | 194 | 0.4 | 169 | 1.1 | 0 | 0.0 | 16 | 0.4 | 0 | 0.0 | 153 | 0.7 | 0 | 0.0 | 0 | 0.0 | 194 | 0.4 | 0 | 0 |
| 130 | 875 | 393 | 482 | 162 | 0.4 | 258 | 2.6 | 0 | 0.0 | 15 | 0.4 | 33 | 0.1 | 243 | 2.2 | 0 | 0.0 | 0 | 0.0 | 129 | 0.3 | 0 | 0 |
| 140 | 1,024 | 516 | 508 | 140 | 0.3 | 268 | 3.1 | 0 | 0.0 | 40 | 1.1 | 4 | 0.0 | 228 | 1.9 | 0 | 0.0 | 0 | 0.0 | 136 | 0.3 | 0 | 0 |
| 150 | 652 | 251 | 401 | 188 | 0.4 | 247 | 3.1 | 0 | 0.0 | 15 | 0.5 | 80 | 0.2 | 232 | 2.6 | 0 | 0.0 | 0 | 0.0 | 108 | 0.2 | 0 | 0 |
| 160 | 878 | 350 | 528 | 502 | 1.4 | 97 | 2.1 | 0 | 0.0 | 9 | 0.4 | 360 | 1.1 | 88 | 1.7 | 0 | 0.0 | 0 | 0.0 | 142 | 0.3 | 0 | 0 |
| 170 | 2,069 | 876 | 1,193 | 324 | 0.6 | 464 | 2.1 | 0 | 0.0 | 4 | 0.1 | 4 | 0.0 | 460 | 2.0 | 0 | 0.0 | 0 | 0.0 | 320 | 0.6 | 0 | 0 |
| 180 | 15 | 4 | 11 | 3 | 0.0 | 3 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 3 | 0.0 | 0 | 0.0 | 0 | 0.0 | 3 | 0.0 | 0 | 0 |
| 190 | 1,818 | 1,036 | 782 | 210 | 0.4 | 146 | 1.6 | 0 | 0.0 | 15 | 0.4 | 0 | 0.0 | 131 | 1.1 | 0 | 0.0 | 0 | 0.0 | 210 | 0.4 | 0 | 0 |
| 200+ | 8,658 | 5,243 | 3,415 | 1,539 | 4.5 | 592 | 5.8 | 0 | 0.0 | 90 | 2.3 | 622 | 2.7 | 502 | 3.5 | 0 | 0.0 | 0 | 0.0 | 917 | 1.8 | 0 | 0 |
| Total | 56,807 | 25,478 | 31,329 | 9,913 | 23.8 | 6,472 | 63.2 | 0 | 0.0 | 610 | 18.9 | 3,271 | 10.9 | 5,862 | 44.4 | 0 | 0.0 | 0 | 0.0 | 6,642 | 12.9 | 0 | 0.0 |

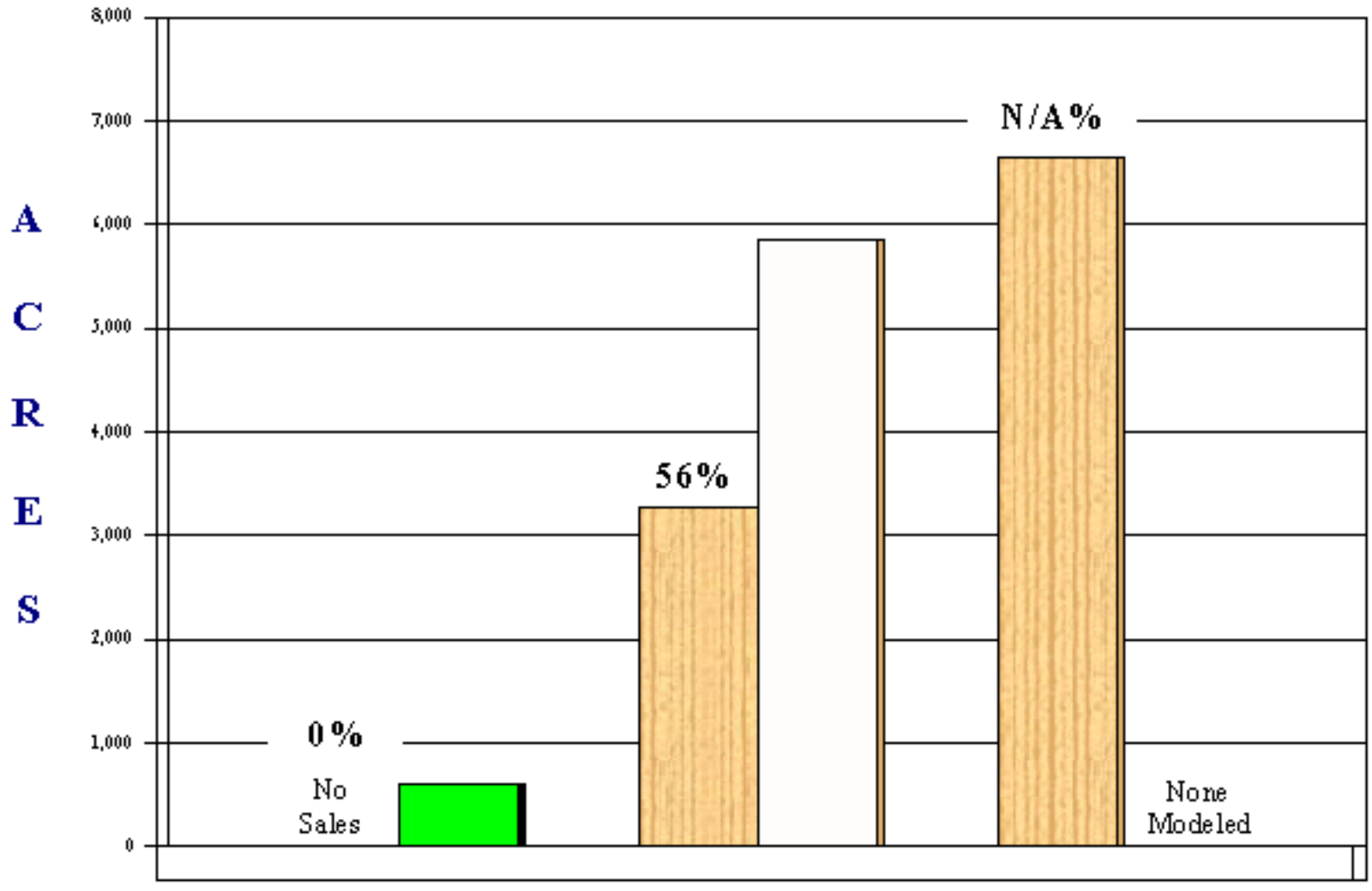
Notes: Volumes derived from TSARS (Timber Sale Automated Records System - GIS). TSARS does not include miscellaneous volume

Combined eastside and westside value, proportioned acres and volume of mortality salvage based on a proportional basis of age 40+ HLB

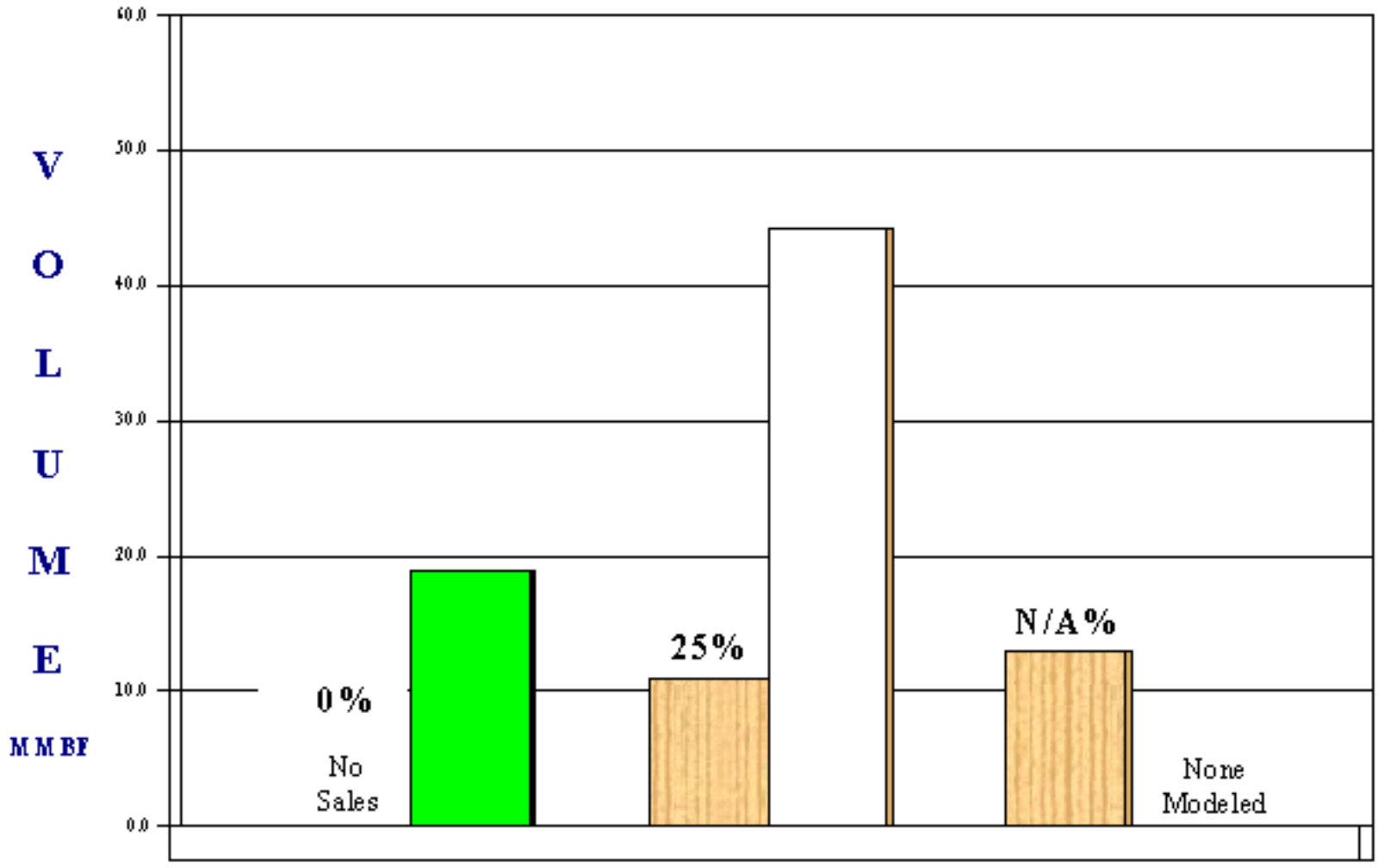
# Klamath Falls - Harvest Types

## RMP Sales Compared With First Decade Modeling Assumptions

### Percent of the Decadal Projection




RMP Sales | Regeneration Harvest | Density Management | Mortality Salvage




Note: Includes both east and westside data.

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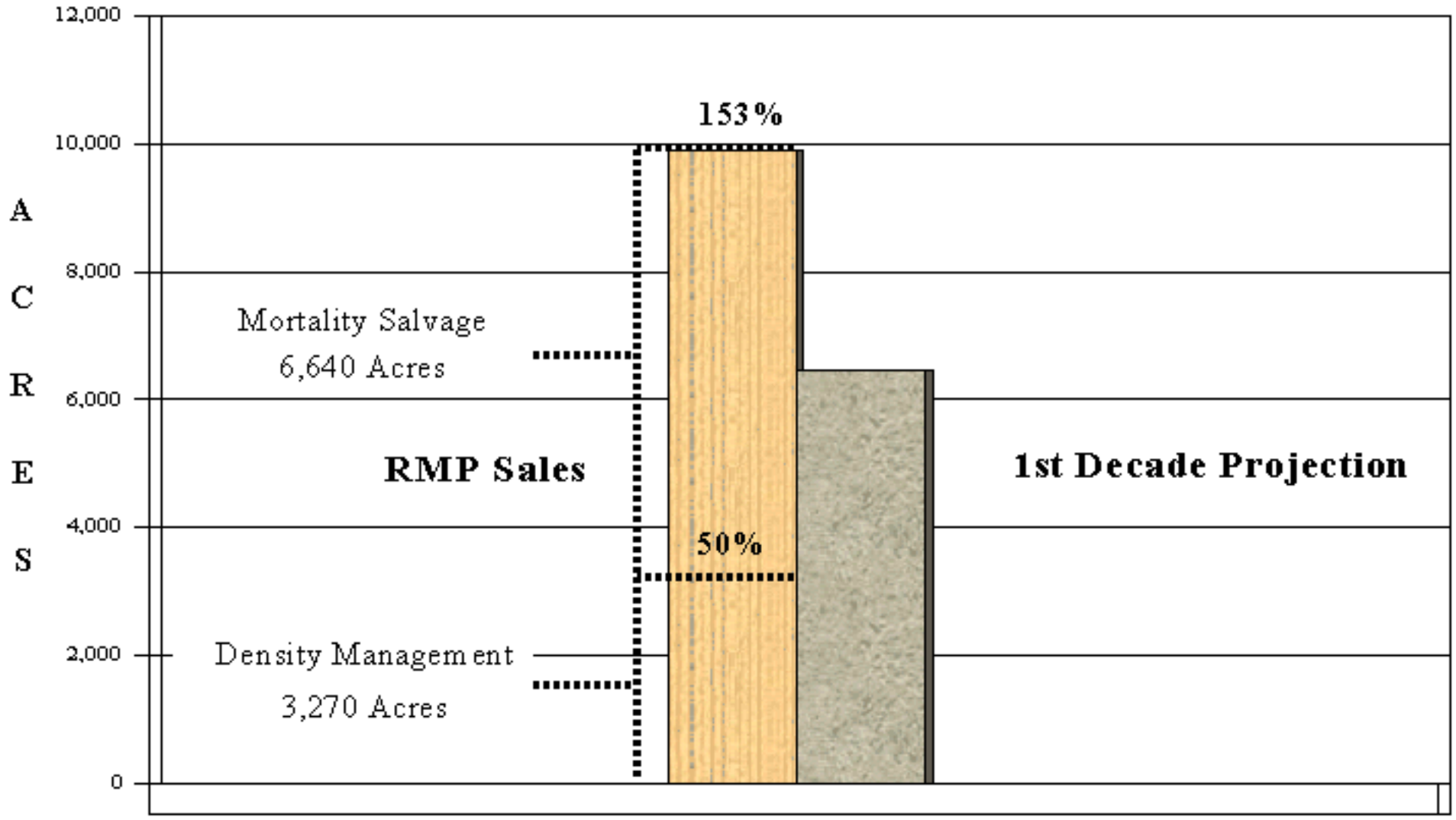
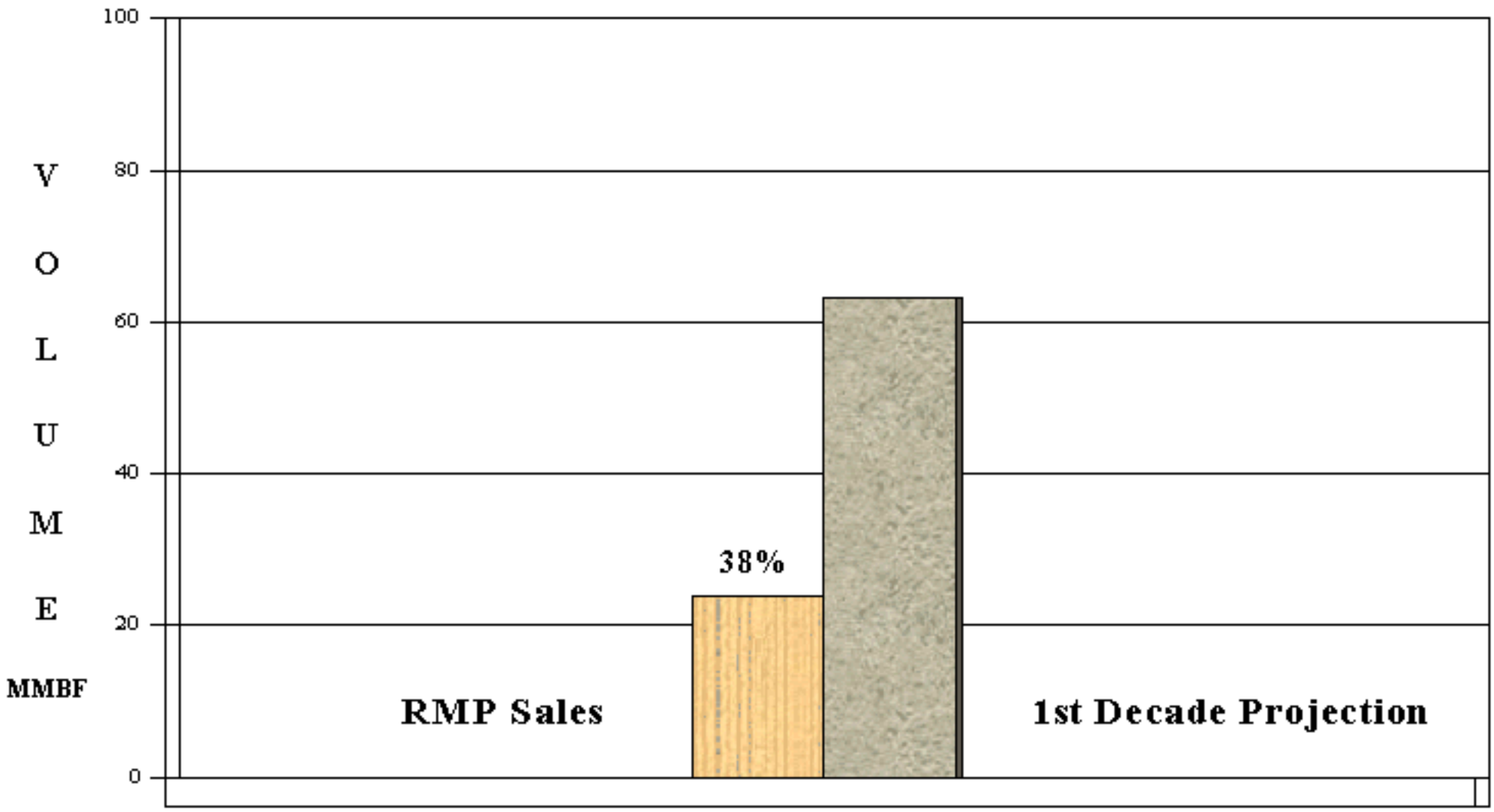
# Klamath Falls - Harvest By LUA

## RMP Sales Compared With First Decade Modeling Assumptions

### Percent of the Decadal Projection




**Matrix** - (South GFMA and Eastside Matrix)




May 1999

**Figure 12-7**

# Klamath Falls Resource Area
# Harvest Types By Land Use Allocations
# RMP Timber Sales Compared with
# First Decade RMP ASQ Modeling
# Acres and Volume (Millions Board Feet - MMBF)

| RMP Timber Sales FY 95-98 - S. GFMA | | |
|---|---|---|
| Harvest Methods | Acres | Volume (MMBF) |
| Regeneration | 0 | 0 |
| Density Management | 3,271 | 10.9 |
| Commercial Thin | 0 | 0 |
| Mortality Salvage | 6,642 | 12.9 |
| Total | 9,913 | 23.9 |

| RMP First Decade Assumptions - S. GFMA | | |
|---|---|---|
| Harvest Methods | Acres | Volume (MMBF) |
| Regeneration | 610 | 18.9 |
| Density Management | 5,863 | 44.2 |
| Commercial Thin | 0 | 0 |
| Mortality Salvage | 0 | 0 |
| Total | 6,472 | 63.1 |

S.GFMA - Southern General Forest Management Area - Includes Eastside and Westside Areas

Note: Volumes derived from TSARS (Timber Sale Automated Records System - GIS). TSARS does not include miscellaneous volume

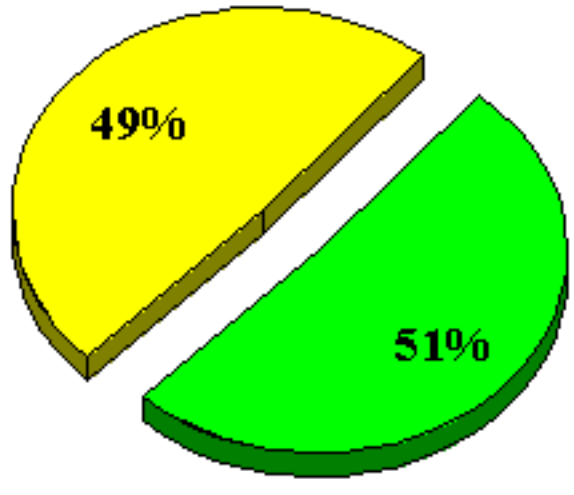
# Klamath Falls

## Key Watershed & Non Key Watershed ASQ

Percentages Based on Cubic Foot Basis

**Non Key Watershed**

0.5 MMCF / (3.1 MMBF)




**Key Watershed**

0.6 MMCF /(3.3 MMBF)

**Non Interchangeable**

## ASQ - 1.1 Million Cubic Feet

(6.3 Million Board Feet)

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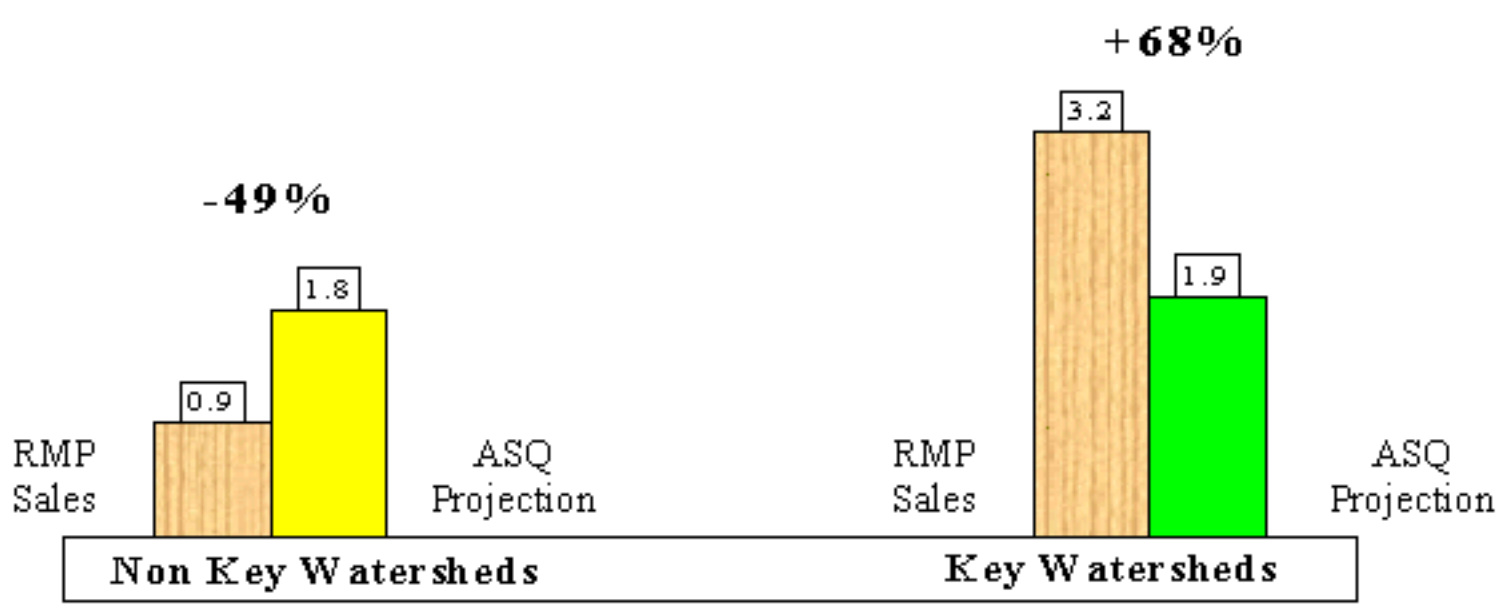
## RMP Sale Volume Compared with ASQ Projections

Evaluation Period Volumes - Million Cubic Feet

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## Key Watershed Sale Acreage Compared with First Decade ASQ Projections

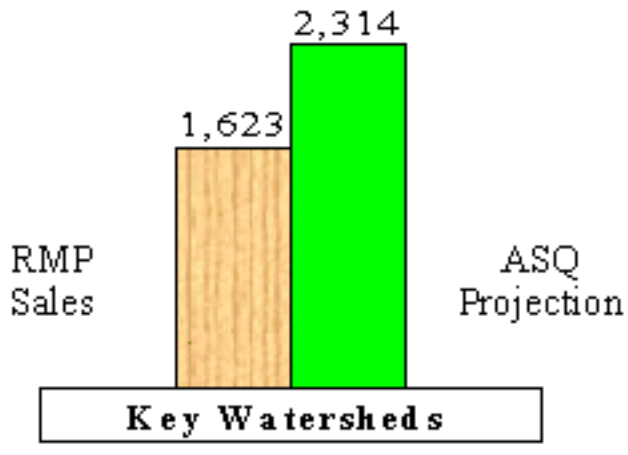
Evaluation Period Acreage - (1,000's Acres)

**Density Mangement Sales were 70% of**

**First Decade Projected ASQ Harvest Acreage**

In addition there was 5,600 acres of Mortality Salvage.

No Mortality Salvage projections were made in the ASQ modeling

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## 13. Forest Silviculture and Woodland Management Practices

There was a wide variance between several silvicultural management actions projected in the RMP and the treatments implemented during the review period. An emphasis on forest health conditions/restoration treatments and harvesting prescriptions and subsequent treatments varied from those published in the RMP. A threshold of significance was used to assess the potential change from the RMP based projections. Base projections were set as the 100% standard level. Variance beyond +/-20%, or 80-120%, indicates a potential change from the RMP documented level and a potential need to change the rate of implementation, to modify current practices to bring treated acreage within an acceptable range, or to modify the decadal projections.[1]

### 13-A. Silvicultural Harvest Treatments and Methods

| Klamath Falls Harvest | Review Period Treated Acreage | Review Period Projected Acreage | Percent of Review Period Projected Acreage Accomplished | Percent of Decadal Projected Acreage Accomplished |
|---|---|---|---|---|
| Regeneration Harvest (Acres) | 0 | 393 | 0.0% | 0.0% |
| Density Management/ Commercial Thin | 8,766 | 2,484 | 352.9% | 105.9% |
| Total Harvest Acreage | 8,766 | 2,877 | 304.7% | 91.4% |

- Klamath Falls Resource Area (KFRA) silvicultural harvest treatment acreage differs considerably from the RMP assumed average annual first decade management action projections.
- Harvest treatments applied correspond to "Forest Condition Restoration" treatments responding to specific forest health biological stochastic conditions (insects, disease, wildfire and/or fuel-hazard buildup). Objectives of these treatments, as identified in the KFRA RMP are to: "Reduce tree mortality and restore the degree of vigor, resiliency, and stability in forest stands which is necessary in order to achieve land use allocation objectives.... There are no specific land use allocations for forest condition restoration. There is the potential for restoration treatment in all allocations."[2]
- The forest condition being treated is associated with near-catastrophic drought, over-stocking of stands or components of stands, species shifts to less resilient species, likely epidemic disease and insect disturbance and fuel profiles favorable to catastrophic wildfire.
- The strong influences of topography, aspect, and stochastic events are reflected in the diverse

[1] A range of variability, 80-120 percent, was used to take into account the year to year variation in project priority, funding, and overall treatment needs and as a guide to determine whether further analysis and/or action may be required.

[2] *Klamath Falls Resource Area Record of Decision and Resource Management Plan and Rangeland Program Summary*, United States Department of the Interior, Bureau of Land Management (1995), 53.

and fragmented vegetation pattern of the landscape. Multi-age, multi-species stands (clues to a frequent disturbance history) are both a habitat management benefit and a severe fire risk element.

- Forest condition restoration harvesting was discussed in the RMP as one of four silvicultural systems proposed for application. Other silvicultural systems discussed are (1) modified even-aged, (2) shelterwood retention, and (3) structural retention systems to be employed to perpetuate multi-species/multi-canopy forests through regeneration harvest and density management treatments.
- Forest condition "risk management" silvicultural harvest prescriptions are expected to be applied until the current high risk forest condition has been adequately reduced. Such risk management harvest prescriptions will likely continue throughout this planning decade.
- The forest conditions/mortality salvage harvest to reduce risk differs from RMP projections in:
  - reduced emphasis on regeneration harvest to initiate young stands or establish even-aged components within stands;
  - greater density management aimed at stocking reduction, short term species retention, and product development;
  - emphasis on treatments to reduce stand susceptibility to large-scale catastrophic wildfire (fuel ladder removal or fuel modification areas);
  - treating large area, watershed or landscape scale treatments and limited volume recovery; and
  - favoring the fewest number of entries to enhance timber or habitat development.
- When the long-term forest health condition is adequately restored, the modeled and RMP-described regulated harvest system appears to be an appropriate silvicultural system.

**13-A Conclusions and Recommended Follow-up**

- Acknowledge that the current forest health/fuel-risk-hazard harvest treatment emphasis is likely to continue for much of the current planning decade. Assess and describe the forest health condition restoration and risk reduction harvest treatments as the preferred silvicultural harvest system and adjust projections of associated practices.
- Update RMP as appropriate.

## 13-B. Reforestation/Re-establishment and Tending Treatments

| Klamath Falls | Review Period Treated Acreage | Review Period Projected Acreage | Percent of Review Period Projected Acreage Accomplished | Percent of Decadal Projected Acreage Accomplished |
|---|---|---|---|---|
| Site Preparation | 215 | 3,540 | 6.1% | 1.8% |
| Planted Acreage | 927 | 1,600 | 57.9% | 23.2% |
| Genetically Selected Planting Stock | 0 | 300 | 0.0% | 0.0% |
| Young Stand Maintenance | 1,455 | 1,800 | 80.8% | 24.3% |
| Totals | 2,597 | 7,240 | 35.9% | 11.9% |

**Site Preparation**

- Post timber harvest site preparation has been accomplished on an "as-needed" basis. The small treatment acreage reflects the emphasis on forest health harvesting as opposed to regeneration harvesting.
- Site preparation treatments associated with risk reduction, mostly restoration underburning, projected at 1,000 acres/year in western KFRA are progressing through required planning phases (watershed analysis, NEPA analysis, etc.).
- Klamath Falls plans to ramp-up their underburning program to the full projected level of 10,000 acres over the remainder of the decade.
- Klamath Falls' landscape-wide forest health program includes a strategic prescription to reduce wildfire fuel-hazard risks, restore stand vigor through density management, underburn, and accomplish limited regeneration site preparation. Many of these treatments are classified under the rubric of "site preparation" and will likely meet the decadal acreage projection.

**Planted Acreage**

Tree planting was accomplished on an on-line basis across all land use allocations.

- Klamath Falls' forest has multiple habitats-compositions requiring site-specific diverse and varied species mixtures in their planting program. These include: ponderosa pine, lodgepole pine, incense cedar, Douglas-fir, white fir, Shasta fir, sugar pine and white pine. The challenge is to have adequate seed and seedlings.

**Genetically Selected Planting Stock**

- Genetically improved stock in KFRA is exclusively western white pine and sugar pine; these species were expected to constitute about 15% of the decadal regeneration harvest planting materials. They were not needed for recent plantations because these species are inappropriate to the areas in which the district is concentrating their work to address forest health concerns.
- Klamath Falls does not have a Douglas-fir genetic improvement program. This species is susceptible to summer frost and is a minor component of their current reforestation program.

- Genetically improved local source ponderosa pine stock from private sources may be available to plant over 10% of the acreage.

**Young Stand Maintenance**

- Young stand maintenance was applied generally in older regeneration harvest or catastrophic fire units. This is expected to evolve into an understory component treatment to improve density (health) or reduce fuel ladder risks.
- KFRA young stand maintenance program has historically involved protection from animals (gopher and porcupine). Limited regeneration harvests have reduced these treatment needs.
- Competitive vegetation management of grass, shrubs or hardwoods in young stands has been relatively minor.

## 13-B Conclusions and Recommended Follow-up

**Site Preparation**

KFRA should update their RMP to more fully reflect their current watershed-wide program of forest health management combining density management harvest, site preparation and underburning-fuel reduction treatments into one prescription.

- The projected decadal levels of site preparation, fuel hazard reduction and underburning should be updated or re-verified.
- Projected site preparation acreage is expected be to attained over the decade but documentation of forest condition restoration objective as developed through watershed analyses may need to be acknowledged.

**Planted Acreage**

- Acknowledgment of little to no reforestation workloads should be made at this time. RMP decadal adjustment is recommended.

**Genetically Improved Planting Stock**

- No adjustment in current policy is needed. Update RMP projected levels for to reflect current and future program.

**Young Stand Maintenance**

- Forest condition restoration treatments (understory treatments to favor desired species and reduce fuel surface and ladders) may approximate the projected acreage levels. Recommend updating treatment descriptions as needed.

## 13-C. Growth Enhancement/Development

| Klamath Falls | Review Period Treated Acreage | Review Period Projected Acreage | Percent of Review Period Projected Acreage Accomplished | Percent of Decadal Projected Acreage Accomplished |
|---|---|---|---|---|
| Precommercial Thinning/Density Management Acreage | 292 | 1,020 | 28.6% | 8.6% |
| Fertilization Acreage | 0 | 429 | 0.0% | 0.0% |
| Conversion Acreage | 0 | 0 | ----- | ---- |
| Pruning Acreage | 0 | 48 | 0.0% | 0.0% |
| Totals | 292 | 1,497 | 19.5% | 5.9% |

**Precommercial Thinning/Density Management**

- Precommercial thinning within the treated acreage (292 acres) fully covers the regulated allowable harvest projection (150 acres) on commercial forest land.
- Projected forest condition restoration precommercial thinning/density management levels were not accomplished. Pending watershed analysis understory treatments to reduce the wildfire fuel-ladder hazard, to manage species composition and structure, to reduce susceptibility to insects and disease in over-stocked stands are expected to be implemented at the projected decadal level.

**Fertilization**

- KFRA has limited acreage projected for fertilization to support a regulated harvest.
- Decadal acreages could easily be treated in any single fiscal year during the remainder of the decade.

**Brush/Hardwood Conversion**

- No conversion or forest restoration acreage was identified on commercial forest land in the RMP.
- Plant community restoration (15 acres/year) was identified as a general forest health issue. Having completed the watershed analysis and late-successional reserve assessments during the review period, it is likely that decadal treatment levels can be accomplished in the remainder of this planning decade.

**Pruning**

- No pruning was accomplished during the review period yet there is adequate opportunity to treat the few acres projected within the remainder of the decade.
- Maintenance pruning of sugar or white pine for blister rust control, pruning low density stands for product quality, and ladder-fuel reduction, in combination with thinning provide multiple "pruning" opportunities to meet the decadal commitment.

## 13-C Conclusions and Recommended Follow-up

**Precommercial Thinning/Density Management**

- Reassess density management forest health restoration treatments to reflect density

management recommendations addressed in the watershed analyses or Late-Successional Reserve Assessments (LSRAs). Wildfire reduction and forest health conditions in young stands or understory components were deferred until the landscape assessment was completed. The RMP should be updated and this new information incorporated into projected treatment levels and prioritized for funding.

**Fertilization**

- Complete the projected fertilization during the next review period in a single contract or as units. A partial decadal completion could be accomplished in conjunction with a Medford contract.

**Brush/Hardwood Conversion**

- No adjustment expected.

**Pruning**

- Complete decadal projection during the next review period.

**13-D. Habitat Restoration**

- Habitat restoration, habitat enhancement and/or risk reduction treatments are recommended in most land use allocations including LSRs and Riparian Reserves. Before habitat manipulation activities are designed and implemented, LSRAs are prepared for each LSR. Likewise, Watershed Analyses must be prepared for treatments within Key Watersheds or Riparian Reserves. These documents are prepared as stand alone assessments. These documents provide criteria for developing appropriate treatments and identify specific areas that could be treated under those criteria. National Environmental Policy Act (NEPA) analysis, and occasionally modification of the RMP, must be completed prior to habitat restoration treatment implementation.
- Managed LSRAs are in progress. Watershed Analysis is completed. See section 18 for further discussion of LSRs. See section 16 for further discussion of Watershed Analysis.
- Silvicultural treatments projected under "forest condition"[3] provide levels of expected treatments and should be targeted during the next review period.

**13-D Conclusions and Recommended Follow-up**

- "Forest condition/health treatments" are the driving force behind the forest management currently being applied within the KFRA. Update RMP to reflect those projected management practices.

**14. Adaptive Management Areas [not applicable to Klamath Falls Resource Area]**

[3] *Klamath Falls Resource Area Record of Decision and Resource Management Plan and Rangeland Program Summary*, United States Department of the Interior, Bureau of Land Management (1995), 53.

**15. Wildlife Habitat and Special Status Species and SEIS Special Attention Species (Terrestrial Animals)**

The focus of the wildlife habitat management program under the Klamath Falls Resource Area's RMP has been maintenance and enhancement of forest habitat and special habitat conditions, along with species inventory and monitoring activities. Since 1995, habitat enhancement work has been completed to benefit species with habitats that are either limited or need enhancement. This work has involved coordination with the timber management program to enhance habitats or maintain certain habitat characteristics, as well as fire program staff to rejuvenate important brush field habitats for big game or to create early successional habitats within late or mature vegetation communities. Other habitat work involved thinning juniper to protect existing shrub or forest communities, or to open the stand and create new shrub communities.

Work in the Wood River Wetland has resulted in restoration of existing dikes and water control structures and creation of new channels and dikes to allow restoration of 3,000 acres of wetland habitat. Restoration work on the Wood River channel as also started. Eventually, the river will be returned to its original channel.

Inventory and monitoring of selected species has provided information on osprey nest sites, pygmy owl presence, and neotropical migratory birds (APS, pp.27). Information was also collected on waterfowl nesting, and sandhill crane activity.

The Resource Area closed or rehabilitated some roads to enhance habitat conditions for wildlife and has identified roads in other areas as candidates for access management. The Resource Area is striving to reach the long-term goal of 1.5 miles of open road per section.

The mix and proportion of harvest types on the Klamath Falls Resource Area for the period examined in the third year evaluation indicates there is a departure from the level of activity projected in the RMP. The major focus of forestry management on the Resource Area has been to treat areas which have experienced tree mortality in epidemic proportions through recovery of dead and dying trees, and to manage forest health through density management of overstocked uneven-aged stands. No regeneration harvests have taken place; however, the RMP calls for 131 acres per year. The main departure from the decadal projection of the number of acres to be harvested is due to the 5,600 acres covered to capture mortality salvage and windthrow. This area comprises 65 percent of the total area harvested during the third year evaluation period. In addition, the area covered for density management was 132 percent of that projected in the RMP, which comprised approximately 35 percent of the total area harvested.

Overall, there is a benefit to capturing mortality salvage as an alternative to regeneration harvest. In the short term there are negative impacts in the immediate area of the salvage; however, in the long term, the benefits of the salvage include a decrease in the fuel loading which would have been above historical levels, and creation of small openings which will provide for tree regeneration and variation in the stand complexity. The canopy closure that would have been provided by the standing dead trees would have been minimal. In addition to the salvage of dead

trees, small trees competing with large pine were harvested. This type of management should be beneficial to the pine dependent species.

Habitat for the Northern spotted owl and other species dependent upon mature forest appeared to be retained in areas salvaged. This would not have been the case for regeneration harvests. A pair of northern spotted owls nested and successfully fledged young in a District Designated Reserve Buffer which had been salvage harvested the previous year (1997). Continued monitoring is needed to make conclusions on the long-term use of this area by the owls.

Salvage of snags only occurred when there was an excess of snags in the vicinity. According to the Regional Ecosystem Office qualitative monitoring review of the Lower Spencer Salvage Sale, the standards and guidelines for snag retention were exceeded for maintaining the 40 percent population level of cavity nesting birds. Snag levels for the Northwest Forest Plan Protection Buffer species were met.

Density management treatments (which comprised 35 percent of the total harvest area) have focused on removal of the smaller understory trees with retention of most of the older trees in the stand. Green tree retention of 16 to 25 of the largest trees per acre were retained. This is not a requirement for density management stands. Overall, the structural components for old growth have been maintained, although in the short term there is a loss of canopy closure. The basal area of trees remaining in a stand is dependent upon the forest community type and will determine the amount of canopy closure that will develop over the longer term. According to the US Fish and Wildlife Service's (USFWS) review of a portion of the areas harvested within the three year review period, they believed spotted owl habitat was retained. Where density management has taken place in pine stands, there should be an increased chance of survival of the pine, which should be beneficial to the Northwest Forest Plan protection buffer species such as the white-headed woodpecker, pygmy nuthatch, and flammulated owl, and to the bald eagle for nest and perch sites.

Large blocks of forest have been treated for density management purposes. In order to provide some variation in the stand density across the landscape, small clumps of trees were retained within the sale areas. The number and acreage of clumps retained was dependent upon the importance of an area to deer and elk and upon the original characteristics of the stand. The combination of these clumps and reserve areas such as Riparian Reserves comprise up to 20 percent of the harvested acres for a given entry. Some of these "wildlife clumps" are comprised primarily of white fir and are overstocked. These "wildlife" clumps may be treated during subsequent harvest entries and are not considered to be permanent reserves. For the sales within the third year evaluation time frame, all wildlife clumps were less than an acre. For the period beyond this evaluation period, larger clumps of up to 15 acres may be retained. The decision not to thin these areas may result in an increase in the number of snags and thus result in a potential benefit to woodpeckers and secondary cavity nesters. No evaluation of the use of these wildlife clumps by wildlife has been made to date.

**Special Status Species/SEIS Special Attention Species (Animals)**
A large part of the management of species that are listed as threatened or endangered under the Endangered Species Act of 1973 (ESA), as amended, as well as those proposed for such listing, is an interactive review and consultation process with the USFWS. This management partnership has ensured that actions proposed by BLM are consistent with existing conservation strategies, recovery plan objectives, and land use plan decisions. All proposed activities that "may affect" listed species or their designated Critical Habitat are formally reviewed by an interagency team of biologists to satisfy requirements of Section 7 of the ESA. The Resource Area continues to be in compliance with all requirements of the ESA and associated regulations.

Within the Klamath Falls Resource Area, the listed species known to occur include the northern spotted owl, bald eagle, Lost River sucker, and shortnose sucker. Field work has focused on obtaining information on the occurrence and distribution of the individuals of these species, along with specific efforts to monitor their reproduction success and survival rates.

Survey and banding of spotted owls in the Resource Area has been an ongoing cooperative effort with both federal and private partners. The information gathered is used in the regional effectiveness monitoring plan for spotted owls and to support the timber sale program (APS, pp.22-23).

The Resource Area has identified 13 bald eagle breeding territories. Survey work on reproduction of bald eagles is done annually in cooperation with the Oregon Cooperative Wildlife Research Unit (Oregon State University) (APS, pp.22). In the past three years, the Klamath Falls Resource Area has located six new active territories.

Although no confirmed nest sites have been located, the Resource Area is also attentive to the possibility of the occurrence of the peregrine falcon (delisted in 1999). On several occasions, individual peregrines have been observed in the area but they appear to be migrant birds.

Additional attention was directed at candidates (likely for ESA listing) and sensitive (potential to become candidate species) in an effort to reduce or eliminate the need to formally list the species under the protective umbrella of the ESA. Surveys have been conducted for numerous species in these categories to include western pond turtles, spotted frogs, bats, martens, fishers and the Canada Lynx (APS, pp.27).

Two other groups of species given specific consideration are survey and manage species, along with protection buffer species. The Resource Area continues to be actively involved in the survey of lands in conjunction with proposed actions that may disturb the habitat of any survey and manage species; emphasis has been on collecting data on mollusks (APS, pp.27) and great gray owls (APS, pp. 23-24)

Other special status species that were monitored include northern goshawk and yellow rail, both sensitive species (APS, pp. 24-25).

**Conclusions and Recommended Follow-up:** The review of Wildlife Habitat and Special Status Species/SEIS Special Attention Species (Animals) concluded that the Resource Area's actions have been consistent with the RMP, as well as the projected impacts and expected effects described in the EIS on the Resource Area's RMP. There are no significant changes required as a result of applicable other federal, state, local or tribal government plans, programs or policies. No significant changes in program direction or practices appear to be warranted based on program monitoring, activity implementation or this review. Adaptive management and continued monitoring work during the remainder of the first decade of implementation are expected to further the implementation of BLM sensitive species management. None of the Resource Area's management action/direction-related issues are considered to be significant enough, either individually or collectively, to prevent the attainment of the objectives for the program as described in the Klamath Falls Record of Decision (ROD, pp.31).

### 16. Aquatic Conservation Strategy, Fish Habitat and Special Status Species and SEIS Special Attention Species (Fish)

The Resource Area has been successful implementing the Aquatic Conservation Strategy (ACS). Initially, documentation of compliance with ACS objectives was lacking; however, clear documentation of how actions meet or would not prevent attainment of ACS objectives is now standard operating procedure. Watershed analysis is 100 percent complete on land covered by the Northwest Forest Plan (APS, pp. 12). Analyses are being used to address at-risk fish stocks and guide restoration activities. Watershed restoration has involved various activities including forest underburning, fuel reduction, archaeological and plant surveys, and juniper thinning (APS, pp. 12). Key Watersheds appear to be functioning as expected.

At the end of 1998, two species and/or ESUs (Evolutionarily Significant Units) of fish found in the Resource Area were listed under the ESA. Additional listings are anticipated in the future.

**Conclusions and Recommended Follow-up:** The interdisciplinary review team concluded that implementation of the Aquatic Conservation Strategy and the fish habitat and fisheries portion of the Special Status Species and SEIS Special Attention Species and habitat resource programs are consistent with the RMP and associated EIS for the first three years. The new fish listings are a change in species status, but do not create a change in circumstance since implementation of the RMP and the ability to implement the RMP has not yet been substantially affected. As more fish species are federally listed, the potential exists for future RMP implementation to be affected as a result of more of the land base containing listed species, biological opinion Terms and Conditions, or internal guidance.

## 17. Special Status Species and Special Attention Plant Species Habitat

Special Status Plant (SSP) resources are actively managed on the Klamath Falls Resource Area (ROD, pp. 36), and no significant RMP deviations were identified for this program. Program activities are focused on inventory, monitoring, habitat protection, and research. Two Conservation Strategies have been prepared to guide management of Special Status Plant species. Between 1995 and 1998, more than 46,300 acres were inventoried for SSP resources. One Special Status Plant Species has been monitored on an annual basis to track population condition and to measure response to habitat enhancement activities.

Habitat protection for several SSP sites has been accomplished through project design features such as prescribed burning and silvicultural activities. Resource Area staff routinely coordinates with adjacent National Forests, U. S. Fish and Wildlife Service (USFWS), and the State of Oregon in managing for SSP of common interest and concern. Development of partnerships with local universities and nonprofit organizations has been an important component of the special status plant program. This has been facilitated by the Challenge Cost Share Program, which is a primary funding source for implementing rare plant study. Special Status Plants are considered in watershed analysis, landscape planning, and other Resource Area planning efforts.

Overall botany interests are considered in ongoing project conformance reviews, environmental analyses (EAs) and all proposed actions that could potentially modify SSP habitats. No special status plant species are currently listed. The Klamath Falls Resource Area maintains a data management system for special status plants that can provide information to project planners and can be used for other SSP management activities. Noxious weed control, dust abatement, road closures, and other management techniques are implemented where needed to protect special status plants per RMP direction. In addition, the Resource Area has actively pursued development of a Native Plant Species Program. Native plant grow-out contracts have been implemented, and deployment of these plant materials will occur as part of restoration projects.

**Conclusions and Recommended Follow-up:** The interdisciplinary review team concluded that the Special Status Species and Special Attention Species Habitat management direction is consistent with the RMP and associated EIS for the first three years. Local data on species populations and habitat management needs have been considered as appropriate and have not contradicted the RMP analytical assumptions, land use allocations, authorized resource uses or anticipated mitigation measures to a sufficient degree to warrant consideration of further analysis or a formal plan amendment or revision at this time. There are no significant changes required as a result of other federal, state, local or tribal government plans, programs, or policies. No changes in program direction or practices appear to be warranted based on program monitoring, activity implementation or this review, although additional plants may be listed and treated as appropriate.

## 18. Late Successional and Riparian Reserves

The Klamath Falls RMP provides for protection and enhancement of late-successional and old-growth forest ecosystems that serve as habitat for associated species. At the time of RMP approval, there were approximately 1,600 acres of mapped Late-Successional Reserves (LSRs) in blocks of land containing 80-100 acres each (RMP/ROD table R-1 and pp. 18). Since then, an additional 118 acres have been identified for northern spotted owl habitats and are being managed as LSRs. The LSR Assessment (LSRA) for the scattered parcels is expected to be completed in FY99 and will help determine management needs and options (APS, pp. 12).

At the time of RMP approval, there were an estimated 19,450 acres of riparian reserves in the west side and 9,100 acres of riparian reserves in the east side of the Klamath Falls Resource Area. Since then, field studies or project oriented analysis has indicated that riparian reserve areas could actually be about 80 to 90 percent of the anticipated acres in the RMP/ROD.

Progress was limited during the initial RMP implementation period pending completion of the LSRA, which is a prerequisite to most project work. There has been virtually no activity or projects in the LSR parcels. A limited number of projects were funded through the Jobs-In-The-Woods program, which facilitated projects to maintain uneven-aged stand characteristics, reduce density of shade-tolerant species, reduce fire risk, and otherwise control stocking levels in the riparian reserves. There were only a few structural improvements or projects, including livestock management and boat ramps. Also, there were no projects for mining.

Density management was completed, and more is anticipated, in the riparian reserve areas to accelerate stand growth of shade-intolerant species and older stand habitat creation. No fertilization was completed or anticipated in either the LSR or riparian reserve areas. Special forest product sales were minimal in volume and based on species sold throughout the Resource Area and not expected to have any adverse effects on LSR or riparian reserve habitat or hydrologic function.

There were no catastrophic (stand-destroying) events in either the LSRs or riparian reserves; however, ongoing scattered mortality is slowly impacting habitats in these areas. Also, there has been no density management sold within the LSR parcels since RMP approval (APS, tables 10-14, pp.46-48). However, some roadside salvage that blocked access and hazard trees in campgrounds was removed. No use of prescribed fire has been completed in the LSRs, to date, but there may be future opportunities. Prescribed fire has been used in riparian reserves, and substantial additional use is anticipated in conjunction with treatment of adjacent matrix lands. The Resource Area has not used the Regional Ecosystem Module for adjusting riparian reserve boundaries.

**Conclusions and Recommended Follow-up:** The interdisciplinary review team concluded that the late-successional and riparian reserve land use allocation and management program elements are consistent with the RMP and associated EIS for the first three years. There is no evidence,

studies, or monitoring to suggest any unexpected significant adverse effects in the near term. Local data will be incorporated into the late-successional reserve assessment (LSRA). Local data have been considered in any projects in the riparian reserves as appropriate to guide, restrict, or prohibit future activities and projects, but have not contradicted the RMP analytical assumptions, land use allocations, authorized resource uses, or anticipated mitigation measures to a sufficient degree to warrant consideration of further analysis or a formal plan amendment or revision at this time. There are no significant changes required as a result of other applicable federal, state, local, or tribal government plans programs or policies.

Overall progress in restoring or enhancing reserve habitats was delayed pending completion of the required assessment, but is expected to accelerate as funding, program and process efficiencies and priorities permit. Since there are no quantified treatment targets or deadlines in the RMP or LSRAs, there is no way to measure progress against a 10 or 20-year period objective. Progress in meeting specific LSRA recommendations could be enhanced if LSR treatments were incorporated into landscape level projects involving non-LSR lands on a broader area and multi-year project basis. Based on the review of the documents cited, no specific recommendations for changes in program direction or implementation were identified.

**19. Transportation and Roads**

The Resource Area believes that the long-term goal of 1.5 miles of road per section (RMP/ROD, pp.71) may not be achievable on the west side (of highway US 97) due to the checkerboard ownership pattern and also considering the present license agreements with adjacent landowners. Preliminary evaluations suggest that 2.3 miles per section for the west side would be more realistic.

The Resource Area is addressing the road density issue in timber sale environmental analyses, which are generally written at the watershed scale. Because most of the areas are already roaded, the timber sales are an efficient way to review roads to determine which ones are needed permanently and which can be temporarily blocked or permanently obliterated upon completion of the sale.

Development of the Transportation Management Plan (TMP) will include specific objectives for each road segment (APS, pp. 59). During 1998, the Resource Area continued developing Transportation Management Objectives (TMO) for all roads controlled by the Bureau through an interdisciplinary team process. The process has been completed for about 75 percent of all roads in the Resource Area as of May 1999, with the remainder expected to be completed by January 1, 2000. The Resource Area is in the process of developing TMOs through the watershed analysis process (see APS, page 41). The TMOs will be used to support watershed analysis and to identify opportunities for road closures where needed. At this point, the Resource Area does not have an action plan dealing specifically with road density reduction, but is dealing with it through the

TMP and TMO process. The Resource Area is using the *Western Oregon Transportation Management Plan* as the basis for developing TMOs for each road segment (see APS, p. 59). TMOs for lands on the east side of the Resource Area have no schedule yet, but are estimated to be done in a couple of years.

**Road density, construction, and closure:** As of May 1995, there were approximately 950 miles (6,900 acres) of roads on BLM-administered lands in the Klamath Falls Resource Area (RMP, pp. 71). In the period from June 1, 1995 to September 30, 1998, Klamath Falls constructed 0.1 miles of permanent roads, fully-decommissioned/obliterated 0 miles of roads and has approximately 0.5-1.0 additional miles scheduled for obliteration in existing timber sales, and closed/gated-off 12 miles of road to the general public (see APS, table summary, pp. 6). Currently, the average road density in Klamath Falls Resource Area is 2.3 miles per square mile north of Highway 66. It is unlikely that the goal of reducing open road densities to 1.5 miles or less per square mile in the Klamath Falls Resource Area will be met across the Resource Area, mainly because of reciprocal rights of way constraints. To reduce road densities in specific areas, the staff will continue to pursue partnerships with adjacent landowners in the area, including Boise Cascade and U.S. Timberlands, who have indicated a willingness and ability to work cooperatively with BLM in enforcing road closures for resource protection goals

Best Management Practices (BMPs) for road closures and Aquatic Conservation Strategies (Evaluation section 16) are being followed. There are some concerns about cross-District inconsistencies in how BMPs and Management Action/Directions for road decommissioning and closures are being interpreted and implemented. The Resource Area appears to be meeting commitments to maintain or improve water quality, fish habitat, and fish passage (APS, pp. 19 and 21).

The Resource Area appears to be meeting objectives to control noxious weeds and nonnative plants associated with the transportation system through the use of an integrated pest management approach and vehicle cleaning stipulation in contracts. (see APS, pp. 52). In a similar manner, the Resource Area is meeting commitments to protect sensitive plant species along roads. According to the APS, Klamath Falls has conducted special status plant inventories, but no road-specific activities are mentioned (see APS, pp. 51). Port-Orford cedar root rot fungus and the host species are not present in the Klamath Falls Resource Area.

Objectives for terrestrial wildlife and their habitat are apparently being met. Although the Klamath Falls RMP Management Action/Direction for wild turkey states “minimize open roads and avoid new road construction within 1/4 mile of nest or roost sites” (RMP/ROD, p. 35), nothing more is mentioned about wild turkey populations or health in either the RMP or APS.

**Conclusions and Recommended Follow-up:** The interdisciplinary review team concluded that any deferrals or partial activity implementation completion is reasonable, given the stage of RMP implementation. Local data have been considered as appropriate, but have not contradicted the RMP land use allocations, authorized resource uses or anticipated mitigation measures to a sufficient degree to warrant consideration of a formal plan amendment or revision at this time.

There are no significant changes required as a result of other federal, state, local or tribal government plans, programs, or policies. However, some changes in program direction or practices regarding reduction of open roads appear to be warranted based on program monitoring and activity implementation. The Resource Area could develop partnerships with landowners, including Boise Cascade and U.S. Timberlands, who have indicated they are willing and able to work cooperatively with BLM in enforcing road closures for resource protection goals. The Resource Area could also coordinate with off-road vehicle user groups to educate their members about the need to respect road closures, rather than relying on law enforcement to enforce the closures.

**Regional, Provincial, Basin and Watershed Analysis and Monitoring**

Monitoring has been completed at a variety of scales and intensities based on resource sensitivity, location within land use allocations, and other factors as prescribed in the RMP/ROD. The annual program summaries have reported progress annually (FY 98 APS, Appendix C, pp. 78). Although many projects designed and initiated following ROD approval have not been completed for final review, the results of monitoring to date have shown a high degree of compliance between assumed design elements and associated mitigating measures and contract or project stipulations. The expected results have indicated a high probability of meeting project design standards and overall RMP objectives. There were no major difficulties in implementing the monitoring program, and any specific program or resource conclusions and recommendations are noted in the applicable sections of this evaluation.

**Ongoing National Environmental Policy Act Program Coordination and Compliance**

**Klamath Falls Planning Decision Needs versus Interior Columbia Basin Ecosystem Management Project (ICBEMP) Potential Decisions**

It is assumed that the proposed ICBEMP direction for vegetation treatments, especially forest and woodland management, noxious weed control, use of modified wildfire suppression and prescribed fire, use of nonnative (such as crested wheat) seedings, and rangeland structural improvements may constrain, restrict, support or expand comparable Klamath Falls RMP decisions. Any changes would be limited to the eastern portion of the Klamath Falls planning area which were not addressed in the Northwest Forest Plan. It is expected that these differences will be clearly documented for the public, which would in turn assist in refining the proposed action in the ICBEMP FEIS and ROD.

**Ongoing National Environmental Policy Act Program Coordination and Compliance**

Program-oriented evaluation discussions indicate ongoing NEPA program compliance is generally well organized and documented. There are noteworthy consultation and coordination efforts with all applicable tribal units, county and local governments, State regulatory agencies, and adjacent National Forests, and BLM management units. There has been essentially no change in the number of required environmental assessments, categorical exclusions, and conformance determinations since RMP approval. The expansion of reliance, where applicable, on “planning and NEPA conformance determinations” was discussed for several programs and could lead to greater efficiency.

"Scoping" of environmental assessments is supplemented by direct contacts with key government units, agencies and user groups. There was no evidence of any NEPA process problems or concerns. There was a potential need for training, especially in regard to implementing the ICBEMP and watershed analysis.

The RMP/EIS is not especially useful for analysis of cumulative effects at the watershed scale, although it is sufficient at the RMP planning level. Watershed and other level analyses provide a mechanism for this lower or smaller scale of analyses, as envisioned by the *Northwest Forest Plan*. That plan incorporates analytical assumptions, especially for water quality, that are not always applicable to portions of the Resource Area where federal lands are small percentages of the overall watersheds. There is a need to develop analytical thresholds for water quality impacts from timber sales, roads and other activities. There is a very limited opportunity or authority for the Resource Area to influence non-federal actions that may have adverse effects within watersheds

Implementation monitoring has been documented in the three APS documents, with most activities having 20% or greater of projects monitored. The 1998 APS Appendix B provides a summary of this activity. There has been limited effectiveness monitoring due to the slow rate of system development and implementation at the regional level.

Post-project monitoring is accomplished in an appropriate manner, and overall documentation of multi-year implementation monitoring is adequate. Due to budget and staffing constraints, staff turnover, unplanned workloads, policy changes, wildfires, etc., most programs have made reasonable cumulative progress. However, the deviations are not individually or cumulatively sufficient to a trigger a plan amendment or revision at this time.

## Acronyms/Abbreviations used in the Text

ACEC - Area of Critical Environmental Concern
ACS - Aquatic Conservation Strategy
ADA - Americans With Disabilities Act
AML - Abandoned Mines Land
APS - Annual Program Summary
ASQ - Allowable Sale Quantity
ATV - All Terrain Vehicle
AUMs - Animal Unit Months
BLM - Bureau of Land Management
BMP - Best Management Practice
CASHE - *Compliance Assessment - Safety, Health and the Environment*
CCF - Hundred cubic feet
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
CEQ - Council of Environmental Quality
CFR - *Code of Federal Regulations*
CWA - Clean Water Act
EA - Environmental Analysis
EEA - Environmental Education Areas
EIS - Environmental Impact Statement
ESA - Endangered Species Act
ESU - Evolutionarily Significant Unit
FEIS - Final Envir. Impact Statement
FERC - Federal Energy Regulatory Commission
FY - Fiscal Year
GFMA - General Forest Management Area
GIS - Geographic Information System
ICBEMP - Interior Columbia Basin Ecosystem Management Project
JITW - Jobs-in-the-Woods
KFRA - Klamath Falls Resource Area
LSR - Late-Successional Reserve
LUA - Land Use Allocation
MBF - Thousand board feet
MMBF - Million board feet
MOU - Memorandum of Understanding
NEPA - National Envir. Policy Act
NFP - Northwest Forest Plan
O&C - Oregon and California Revested Lands
ODFW - Oregon Dept. of Fish and Wildlife
OHV - Off-Highway Vehicles
OSO - Oregon State Office
PACs - Province Advisory Councils
PL - Public Law
POC - Port-Orford Cedar
RMP - Resource Management Plan
RMP/ROD - *Klamath Falls Resource Management Plan/Record of Decision*
RNA- - Research Natural Area
ROD - Record of Decision
RR - Riparian Reserve
R/W - Right-of-Way
SEIS - Supplemental Environmental Impact Statement
SFP - Special Forest Products
S&M - Survey and Manage
SSP - Special Status Plant
TMO - Transportation Management Objective(s)
TPR - Technical Procedures Review
TSARS - Timber Sale Automated Record System
TSIS - Timber Sale Information System
USFS - U.S. Forest Service
USFWS - U.S. Fish and Wildlife Service
VRM - Visual Resource Management
WSA - Wilderness Study Area